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SOUTHERN
# TEXTILE BULLETIN

VOL. 32 CHARLOTTE, N. C., THURSDAY, JUNE 16, 1927 NUMBER 16

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You Buy Northrop Looms
To Get Results
You Should Buy
Draper Bobbins
Draper Shuttles and
Draper Loom Repairs
For the Same Reason
**Let's Talk It Over**

**DRAPER CORPORATION**
Southern Office Atlanta Georgia **Hopedale Massachusetts**

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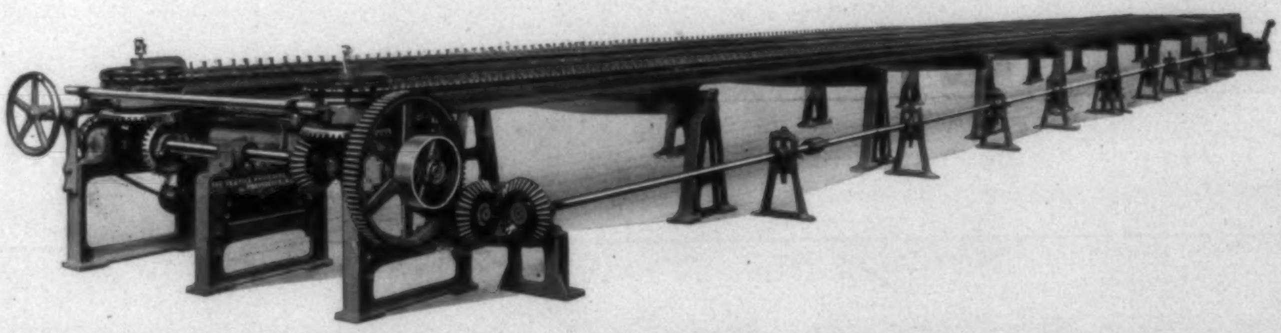
# TENTERS

*For all kinds of*

## Cotton, Silk, Rayon, Silk and Cotton, and Rayon and Cotton Fabrics



All types of Tenters which we manufacture are properly designed and constructed for strength and many years of service.

In the construction of our Tenters only the best of quality materials are used and the workmanship is unequaled. This is visible in the above illustration which is the latest addition to our many different types of Tenters that we manufacture. This machine is equipped with sturdy cast iron supporting stands and rails of our new improved type and with links which insure a positive grip on practically all classes of fabrics.

We should be very glad to give you the complete details of this equipment at your request.

**We Manufacture Machinery for**

## Bleaching, Mercerizing, Dyeing, Drying, Printing and Finishing Textile Fabrics and Cotton Warps

# THE TEXTILE FINISHING MACHINERY CO.

**Main Office and Works**
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**New York Office**
**30 Church St.**

**Southern Representative, H. G. Mayer, Charlotte, N. C.**

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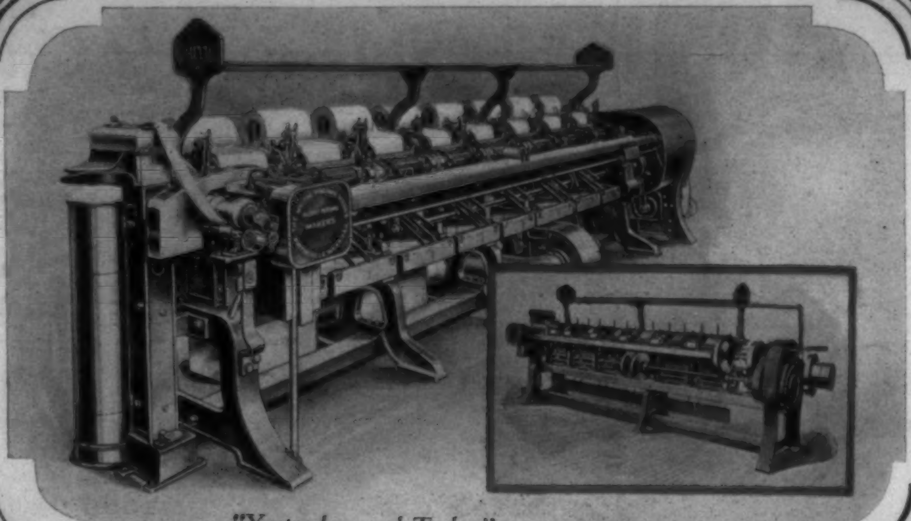
ESTABLISHED 1831



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JOHN N. WILLYS

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JOHN WILLYS—outstanding American manufacturer and merchandizer—says: "The commodity must be at least two-thirds sold before the salesman closes the purchase."

* * * * * *

This publication is a part of that essential selling job that means the ultimate order.

* * * * * *

Behind the salesman's call is a great chain of information. Changes in practice, new ideas, new policies of manufacturing and marketing—all these reach your eye as a reader and buyer through the editorial pages.

And just as the editorial pages point out new methods and new opportunities of cost-saving or profit-making so the advertising pages reinforce the editorial content with their specific information on products, commodities or services that will put their new ideas to work in your business.

When you reread this issue think of it not as pages of printed paper but as an inventory of information and products and service to help its readers—its editorial material selected from the best of the present, its advertising pages, the paid announcements and descriptions of the output of businesses made to serve you as yours is run to serve others.

ABP

The A. B. P. is a non-profit organization whose members have pledged themselves to a working code of practice in which the interests of the men of American industry, trade and professions are placed first—a code demanding unbiased editorial pages, classified and verified paid subscribers, and honest advertising of dependable products.

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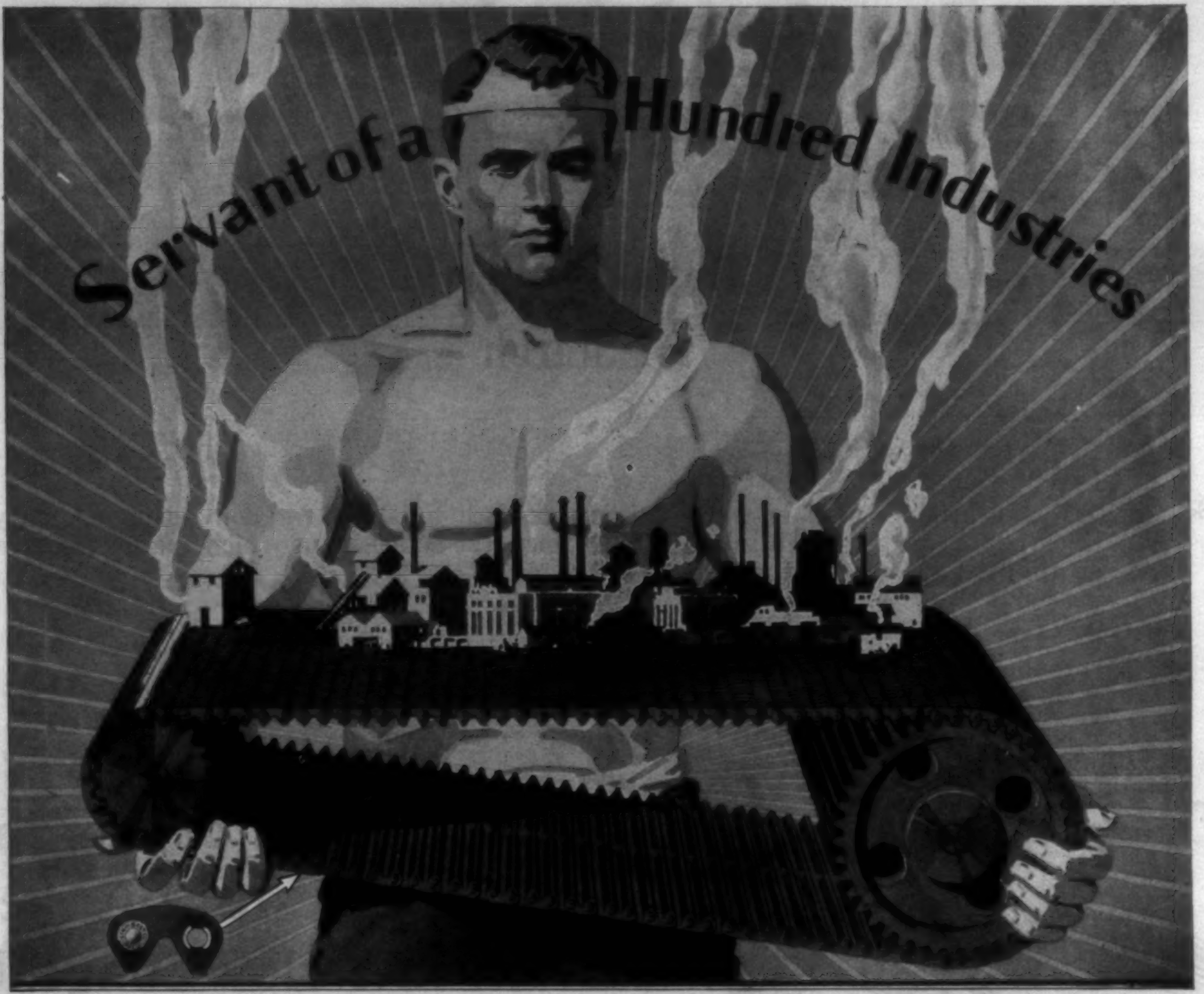
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**SILENT CHAIN DRIVES**

# ARCY—

## A Means of Getting The Most Value From a Dollar's Worth of Starch

ARCY is a product used in warp sizing and cloth finishing for converting ordinary thick boiling pearl starch into a soluble form, the solutions of which are transparent and remain fluid at lower temperatures.

"Warp Dressing Service Improves Weaving"

Trademark Reg. U. S. Patent Office

Arcy converts each granule of starch in the cooking kettle into slow congealing liquid, preventing any lumps in the size box and in the pipe lines.

*Manufactured by*

AMERICAN RAPIDASE COMPANY, Inc.

*Distributed through*

# DRAKE CORPORATION

NORFOLK, :: VIRGINIA

SOUTHERN
TEXTILE BULLETIN

PUBLISHED EVERY THURSDAY BY CLARK PUBLISHING COMPANY, 18 WEST FOURTH STREET, CHARLOTTE, N. C. SUBSCRIPTION $2.00 PER YEAR IN ADVANCE. ENTERED AS SECOND CLASS MAIL MATTER MARCH 2, 1911, AT POSTOFFICE, CHARLOTTE, N. C., UNDER ACT OF CONGRESS, MARCH 3, 1897.

VOL. 32 CHARLOTTE, N. C., THURSDAY, JUNE 16, 1927 NUMBER 16

# *Reports on Four Tests Made by Arkwrights*

Reports on three very interesting tests made for membership in the Arkwrights have recently been prepared for publication, summaries of these reports being given below. In making public the summary of each of these tests, Secretary J. M. Gregg states that the full reports of the tests are available when desired and may be had by writing him at Charlotte.

Two of these tests deal with the breaking strength of yarns before and after sizing and the percentage of added weight. Another was made to determine the percentage of contraction on goods made from 30s and 40s yarns and from 9s to 18s yarns, the goods in both cases having been made on looms with high take up rolls. The fourth test deals with the percentage of ends down per hundred spindles per hour and the breaking strength of No. 21s yarns made from roving with varying twist.

## Test Number Ten

(Prepared and submitted by W. H. Gibson, Jr., Supt. and Mgr., Aileen Mills, Biscoe, N. C.)

TEST

Breaking Strength of Yarn Before and After Sizing, also percentage of Added Weight.

In making this test we used one-inch Western Cotton, old-time bale breakers, regular breakers, intermediate and finisher pickers.

We carded 128 pounds per card per 10 hours. We used single process drawing and have slubbers, intermediates and speeders. Double creel roving on spinning.

This yarn is used for a ground warp of a Krinkle Bedspread and our size formula at the slasher is as follows:

100 gallons of water.
110 pound of 40 fluidity corn starch.
12 pound compound.
10 pound of tallow.
5 pounds Japan wax.

The above is boiled for two hours with temperature in size box as near 200 Fahrenheit as possible before using.

After making a test of 400 sizings and breakings of yarn before being sized, and a test of 400 sizings and breakings of yarn after being sized, I found the following to be true:

From the test of 400 sizings and breakings of yarn before being sized I obtained an average number of 20.75 yarn and an average breaking weight of 90.38 pounds.

From the test of 400 sizings and breaking of yarn after it had been sized I obtained an average number of 17.92 and an average breaking weight of 108 pounds, which gives an increase or added weight of 13.63 per cent or an average increase of breaking strength of 17.2 per cent.

These averages of increase were taken from the entire test which was 400 before sizing and 400 after sizing.

It is our aim to add between 15 per cent and 20 per cent weight, for not only do we hope to profit by the added weight but our experience has been that where we have such humidity, a heavy sizing gives better running work as well as a better looking piece of goods.

The above test is submitted as the findings from this applicant. The results are not intended to be conclusive, as we expect to compile numerous similar tests from others in different sections and under different local conditions to arrive at a conclusive result before announcing a definite conclusion.

The Arkwrights welcome criticism and suggestions of the methods used in making this test.

## Test Number Eleven

(Prepared and submitted by G. A. Franklin, Gen. Supt., Enterprise Mfg. Co., Sibley Mfg. Co. and Augusta Factory, Augusta, Ga.)

TEST

Breaking strength of yarn before and after sizing, also percentage of added weight.

The tests submitted below were made under nearly the same conditions. Our humidity at the time the tests were made was about 65 per cent and kept nearly that amount throughout the test. After sizing the yarn we allowed it to stand for a day in the room with this amount of humidity before breaking.

This test was made by taking 800 bobbins at random from the spinning frames.

This yarn was reeled and broke with the following results:

| | |
|---|---|
| Average number | 23.90 |
| Heaviest was | 21.41 |
| Lightest | 23.81 |
| The average breaking strength being | 65.57 lbs. |
| The weakest bobbin breaking at | 53 lbs. |
| The strongest bobbin breaking at | 79 lbs. |

Yarn from the same bobbins was then sized with the following results:

| | |
|---|---|
| Average number | 21.95 |
| Heaviest was | 20 |
| Lightest | 23.81 |
| Weakest break being | 61 lbs. |
| Strongest | 97 lbs. |
| With an average break of | 77.71 lbs. |
| A gain in weight of | 9.44% |
| Increased breaking strength of | 18.51% |

This was sized in the usual way, using 200 gallons of water, 170 pounds starch and 27 pounds of sizing compound.

This mill uses a middling cotton, ⅞ inch staple, which is run through 3 verticals and one horizontal opener, then through breaker intermediates and finisher pickers, making a 13 ounce lap. 50 grain card sliver run through two processes of drawing producing 53 grain finished drawing sliver, making a 56 hank slubber roving, 1.60 intermediate hank roving and a 4.50 hank speeder roving, double creel spinning, standard number warp yarn being 24.

## Test Number Twelve

(Prepared and submitted by W. A. Black, Supt., Beaumont Mfg. Co., Spartanburg, S. C.)

TEST

Determine the percentage of contraction on goods constructed of 30s to 40s yarns and made on looms with high take-up rolls, and percentage of contraction of goods constructed of 9s to 18s yarns made on looms with high take-up rolls.

Percentage of contraction on goods constructed of 30s to 40s yarns:

| Construction | Kind of Goods | % of Contraction |
|---|---|---|
| 37½ inch 100 x 64 4.00 Yd. | Broadcloth | 4.00 |
| 39 inch 80 x 92 4.00 Yd. | Pajama Checks | 6.22 |
| 39 inch 80 x 80 4.00 Yd. | Sheetings | 6.30 |
| 36½ inch 72 x 80 4.70 Yd. | Pajama Checks | 6.37 |
| 37½ inch 92 x 72 4.25 Yd. | Six Cords to Inch | 7.03 |
| 39 inch 68 x 72 4.75 Yd. | Sheetings | 7.03 |
| 30 inch 68 x 76 4.00 Yd. | Three-Leaf Twills | 7.35 |

Percentage of contraction on goods constructed of 9s to 18s yarns:

The following is percentage of contraction of goods constructed of 9s to 18s yarns and made on looms with high take-up rolls.

| Construction | Kind of Goods | % of Contraction |
|---|---|---|
| 30 inch 104 x 48 2.65 Yd. | Four-Leaf Twills | 3.84 |
| 29 inch 78 x 30 2.00 Yd. | Flat S. F. Duck | 3.84 |
| 30 inch 88 x 40 2.85 Yd. | Four-Leaf Twills | 4.01 |
| 34 inch 112 x 64 2.10 Yd. | Sateens | 5.13 |
| 37½ inch 108 x 52 2.10 Yd. | Sateens | 6.25 |
| 29 inch 64 x 44 2.80 Yd. | Heavy Sheetings | 6.25 |
| 38½ inch 40 x 36 2.26 Yd. | Heavy Sheetings | 6.25 |
| 28 inch 54 x 42 3.05 Yd. | Heavy Sheetings | 6.40 |
| 30 inch 56 x 32 4.50 Yd. | Heavy Sheetings | 7.00 |
| 38 inch 39 x 30 2.40 Yd. | Heavy Sheetings, Soft | 7.60 |
| 40 inch 32 x 28 3.50 Yd. | Heavy Sheetings | 8.31 |
| 36 inch 32 x 28 3.90 Yd. | Heavy Sheetings | 8.31 |
| 29½ inch 32 x 32 3.33 Yd. | Osnaburgs | 6.31 |
| 31 inch 60 x 72 3.15 Yd. | Three-Leaf Twills | 8.75 |

## Test Number Thirteen

(Prepared and submitted by P. A. Smith, Supt., Ninety-Six Cotton Mills, Ninety-Six, S. C.)

TEST

Test No. 21 Yarn made from various twists in roving for ends down per hundred spindles per hour and breaking strength.

WARP SPINNING END BREAKAGE

Test No. 1

| | | | | | |
|---|---|---|---|---|---|
| Standard Hk. Rov. | 290 | R.P.M. Roll | 121 | Draft | 7.64 |
| Hank Rov. | 2.95 | Dia. Ring | 2¼" | Twist per inch | 21.34 |
| Yarn No. | 21.50 | Flange | 2 | Twist Multiple | 4.71 |
| Actual | 22.40 | Drive—Tape. | | Tem. | 84 |
| Hrs. test | 20 | Speeder twist gear | 20 | Rel. Hum. | 61 |
| Total spin. hrs. | 2280 | | | Spin. per frame | 228 |

| Causes | Ends Down | Per Cent | Ends Broken Per 100 Spin. |
|---|---|---|---|
| Unclassified | 12 | 42.856 | .5263 |
| Hard Ends | 4 | 14.286 | .1754 |
| Flying Lint | 4 | 14.286 | .1754 |
| Top Clearer Waste | 4 | 14.286 | .1754 |
| Broken by Operator | 4 | 14.286 | .1754 |
| Total | 28 | 100.00 | 1.2275 |

### Test No. 1

| | |
|---|---|
| Average actual hank roving | 2.90 |
| Turns per inch of twist in roving | 2.48 |
| Twist multiplier | 1.46 |
| Total skeins weighed and broken | 400 |
| Average number yarn from all skeins | 21.80 |
| Per cent of "Weighings" lighter than average | 46.00% |
| Per cent of weighings heavier than average | 54.00% |

Note—Allowing a tolerance in variation of 5 per cent, that is, 2½ per cent lighter than average and 2½ per cent heavier than average, or, approximately one-half number each way from average; the allowed variation would be 21.30 to 22.20.

| | |
|---|---|
| Per cent lighter than tolerance | 20.50 |
| Per cent heavier than tolerance | 17.25 |
| Per cent within tolerance | 62.25 |

The sense of the tolerance is to see which roving will produce most yarn within a given range of variation in number.

### BREAKING STRENGTH

| | |
|---|---|
| Number skeins broken | 400 |
| Average breaking strength | 85.53 |
| Per cent of skeins broke above average | 47.75 |
| Per cent of skeins broke below average | 52.25 |
| Standard breaking strength of this yarn | 88 lbs. |
| Per cent broke standard or better | 27.75 |
| Per cent broke below standard | 72.25 |
| "Tolerance" of 5 per cent allowed, under standard | 84 lbs. |
| Per cent under tolerance | 20.50 |

Observation was made for 20 hours for record of ends down per 100 spindles per hour. See record attached.

| | |
|---|---|
| Ends down per 100 spindles per hours | 1.227 |

### WARP SPINNING END BREAKAGE

### Test No. 2

| | | | | | |
|---|---|---|---|---|---|
| Standard Hk. Rov. | 2.90 | R.P.M. Front Roll | 121 | Spinning Draft | 7.64 |
| Act., Hk. Rov. | 2.92 | Dia. Ring | 2¼" | Twist Per Inch | 21.34 |
| Yarn No. Std. | 21.50 | No. Flange | 2 | Twist Mult. | 4.71 |
| Act. Yarn No. | 21.72 | Drive—Tape. | | Temp. R. H. | 61% |
| Hrs. of Test | 20 | Speeder Twist Gear | 21 | Spin. Per Frame | 228 |
| Total Spin. Hrs. | 2280 | | | | |

| Causes | Ends Down | Per Cent | Ends Broken Per 100 Spin. |
|---|---|---|---|
| Unclassified | 17 | 42.50 | .7456 |
| Singlings | 2 | 5.00 | .0877 |
| Hard Ends | 2 | 5.00 | .0877 |
| Bad Top Rolls | 3 | 7.50 | .1311 |
| Flying Lint | 4 | 14.00 | .1754 |
| Top Clearer Waste | | | |
| Lint on Travelers | 11 | 27.50 | .4824 |
| Shaky Spindles | 1 | 2.50 | .0438 |
| Totals | 40 | 100.00 | 1.7537 |

### Test No. 2

| | |
|---|---|
| Average actual hank roving | 2.92 |
| Turns per inch of twist in roving | 2.37 |
| Twist multiplier | 1.37 |
| Total skeins weighed and broken | 400 |
| Average number yarn from all skeins | 21.72 |
| Per cent of weighings lighter than average | 55.50 |
| Per cent heavier than average | 44.50 |

Note—Allowing a tolerance in variation of 5 per cent, that is, 2½ per cent lighter and 2½ per cent heavier than average, or approximately one-half number each way from average. The allowed variation would be No. 21.22 to 22.22.

| | |
|---|---|
| Per cent lighter than tolerance | 18.00 |
| Per cent heavier than tolerance | 18.00 |
| Per cent within tolerance | 64.00 |

The sense of the tolerance is to see which roving will make most yarn within a given range of variation in number.

### BREAKING STRENGTH

| | |
|---|---|
| Number skeins broken | 400 |
| Average breaking strength | 89 |
| Per cent broke above average | 44.50 |
| Per cent broke below average | 55.50 |
| Standard breaking strength for this number yarn | 88.50 |
| Per cent broke standard or better | 53.25 |
| Per cent broke below standard | 46.75 |
| Tolerance of 5 per cent below standard | 84 |
| Per cent broke below tolerance | 15.25 |
| Ends down per 100 spindles per hour | 3.151 |

### WARP SPINNING END BREAKAGE

| | | | | | |
|---|---|---|---|---|---|
| Standard Rov. | 290 | R.P.M. Front Roll | 121 | Draft | 7.64 |
| Hank Rov. | 2.96 | Dia. Ring | 2¼" | Twist Per Inch | 21.34 |
| Yarn No. | 21.50 | Flange | No. 2 | Twist Multi. | 4.71 |
| Actual | 21.84 | Drive—Tape. | | Temp. | 84 |
| Hrs. Test | 20 | Speeder Twist Gear | 22 | Rel. Hum. | 61 |
| Total Spin. Hrs. | 2280 | | | Spin. Per Frame | 228 |

| Causes | Ends Down | Per Cent | Ends Broken Per 100 Spin. |
|---|---|---|---|
| Unclassified | 20 | 41.666 | .8772 |
| Bunches in Rov. | 4 | 8.334 | .1754 |
| Steel roll lap | 8 | 16.666 | .3508 |
| Flying Lint | 8 | 16.666 | .3508 |
| Top Clearer Waste | 4 | 8.334 | .1754 |
| Mechanically Bad Spindle | 4 | 8.334 | .17.54 |
| Totals | 48 | 100.000 | 2.1050 |

### Test No. 3

| | |
|---|---|
| Average actual hank roving | 2.96 |
| Turns per inch of twist in roving | 2.96 |
| Twist multiple | 1.32 |
| Total skeins weighed and broken | 400 |
| Average number yarn from all skeins | 21.84 |
| Per cent of weighings lighter than average | 50.25 |
| Per cent of skeins heavier than average | 49.75 |

Note—Allowing a tolerance of 5 per cent in variation, that is, 2½ per cent lighter than average and 2½ per cent heavier than average, or one-half number each way from average, the allowed variation would be 21.34 to 22.34.

| | |
|---|---|
| Per cent of skeins lighter than tolerance | 19.50 |
| Per cent of skeins heavier than tolerance | 20.25 |
| Per cent within tolerance | 60.25 |

The sense of the tolerance is to see which roving will produce most yarn within a given range of variation.

### BREAKING STRENGTH

| | |
|---|---|
| Number skeins broken | 400 |
| Average breaking strength | 86 |
| Per cent broke average and above | 48.25 |
| Per cent broke below average | 51.75 |
| Standard breaking strength of this yarn | 88 lbs. |
| Per cent broke standard or better | 32.00 |
| Per cent broke below standard | 68.00 |
| Allowing a tolerance of 5 per cent in strength below standard | 84 |
| Per cent broke below tolerance | 26.50 |
| Ends down per 100 spindles per hour | 2.105 |

(See record attached.)

### WARP SPINNING BREAKAGE

### Test No. 4

| | | | | | |
|---|---|---|---|---|---|
| Standard Rov. | 2.90 | R.P.M. Front Roll | 121 | Draft | 7.64 |
| Hank Rov. | 2.98 | Dia. Ring | 2¼" | Twist Per Inch | 21.34 |
| Yarn No. | 21.50 | Flange | 2 | Twist Multi. | 4.71 |
| Actual | 21.65 | Drive—Tape | | Temp. | 84 |
| Hrs. Test | 20 | Speeder Twist Gear | 23 | Rel. Hum. | 6 |
| Total Spin. Hrs. | 2280 | | | Spin. Per Frame | 228 |

| Causes | Ends Down | Per Cent | Ends Broken Per 100 Spin. |
|---|---|---|---|
| Unclassified | 36 | 69.231 | 1.5970 |
| Hard Ends | 12 | 23.077 | .6263 |
| Flynig Lint | 4 | 7.692 | .1754 |
| Totals | 52 | 100.000 | 2.2987 |

### Test No. 4

| | |
|---|---|
| Average actual hank roving | 2.98 |
| Turn per inch of twist in roving | 2.12 |
| Twist multiplier | 1.23 |
| Total skeins weighed and broken | 400 |
| Average number yarn from all skeins | 21.65 |
| Per cent of weighings lighter than average | 46.00 |
| Per cent of yarn heavier than average | 54.00 |

Note—Allowing a tolerance of 5 per cent in variation, that is, approximately one-half number each way from average, or 2½ per cent each side of average, the allowed variation would be from 21.15 to 22.15.

| | |
|---|---|
| Per cent lighter than tolerance | 24.25 |
| Per cent heavier than tolerance | 25.00 |
| Per cent within tolerance | 50.75 |

The sense of the tolerance is to show which roving will produce most yarn within a given range of variation.

### BREAKING STRENGTH

| | |
|---|---|
| Number skeins broken | 400 |
| Average breaking strength | 86 |
| Per cent broke average and better | 50.75 |
| Per cent broke below average | 49.25 |
| Standard breaking strength of this yarn | 89 |
| Per cent broke standard and better | 30.00 |
| Per cent broke below standard | 70.00 |
| Allowing a tolerance of 5 per cent below standard | 80 lbs. |
| Per cent broke below tolerance | 29.25 |
| Ends down per 100 spindles per hour | 2.2987 |

### SUMMARY OF ALL TESTS

| | Test No. 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Average actual hank roving | 2.90 | 2.92 | 2.96 | 2.98 |
| Turns per inch of twist in roving | 2.48 | 2.37 | 2.26 | 2.12 |
| Twist multiplier | 1.46 | 1.37 | 1.32 | 1.23 |
| Total skeins weighed and broken | 400 | 400 | 400 | 400 |
| Average number yarn from all skeins | 21.80 | 21.72 | 21.84 | 21.65 |
| Extreme variation— | | | | |
| Lightest | 23.15 | 23.31 | 23.26 | 23.81 |
| Heaviest | 20.00 | 20.00 | 20.07 | 20.00 |
| Per cent lighter than average | 46.00 | 55.50 | 50.25 | 46.00 |
| Per cent heavier than average | 54.00 | 44.50 | 49.75 | 54.00 |

(Continued on Page 32)

# E. F. HOUGHTON & CO.

ESTABLISHED 1865

The HOUGHTON LINE

## "That Brute Brand of Vim Leather Check Strap for Draper Looms is Sure Some Brute"—

*A Customer.*

**Supplemental**

*by Chas. E. Carpenter,*

President of E. F. HOUGHTON & CO.

A COUPLE of weeks or so back in these pages I made reference to "THE BRUTE BRAND OF VIM LEATHER STRAPS FOR DRAPER LOOMS." But the reference was so slight that one of my 57 varieties of bosses associated with me in business, called me to task because I did not go into greater detail and feature the fact that these straps are the last word in an up-to-the-minute check for Drapers.

### So here goes for more details.

The strap is full VIM tanned and contains all the length of fibre for which VIM tannage is noted. The hide is especially selected for its density of fibre plexus, which imparts to the strap the desirable cushioning or shock absorbing properties. The grain surface of the hide is not smoothed and level as with belt leather and therefore there is less actual surface contact of the strap with the stick and a greater cushion efficiency. In the finishing of the BRUTE BRAND VIM LEATHER the nonslip properties of VIM Leather Belting are omitted, which also adds to the efficiency of the check and to shock absorption.

When we state that the BRUTE BRAND "is full VIM tannage," we mean that the hide has been submitted to the same beamhouse and tan house process as VIM Belt leather. The hair has been removed, of course.

We had 1,000 straps made up, 500 with the hair and 500 as we are now making the BRUTE brand, and they were tested in groups, strap for strap in many mills in a practical way, and the tests supervised by a member of the Houghton Research Staff. The comparison demonstrated most emphatically that the full VIM tannage, which is only possible where the hair has been removed, is decidedly more durable.

If conditions were such that E. F. Houghton & Co. had been one of those corporations where the stockholders hold the executives strictly accountable for profits, I have not the slightest doubt but that I would come in for a good sound censure because of the time and money I have authorized the Houghton Research Staff to spend in developing the BRUTE BRAND OF VIM LEATHER CHECK STRAP FOR DRAPER LOOMS. But inasmuch as I have an unbreakable contract as General Manager, and own a majority of the stock, and can elect myself president against all opposition, I don't see what anyone is going to do about it.

I got the idea that there is no mechanical purpose for which leather is used, where the VIM process of tannage will not produce the best product, and when I get an idea of that sort it is my custom and hobby to carry it to a conclusion.

The price of these checks is very attractive, notwithstanding the quality.

**E. F. HOUGHTON & CO.**
**Box 6913, N. Philadelphia, Pa.**

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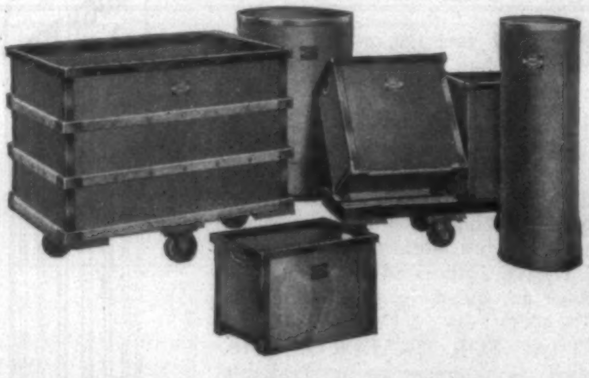

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# *Weaving Qualities of Yarns*

A Lecture before the British Association of Textile Managers,
by W. T. Wilkinson.

ONE of the first essentials in the process of manufacturing is that the yarns must be suitable for the fabrics to be produced, and very often suitable yarns in this sense may not contain all the good qualities in regard to the requirements for the weaving process.

It does not concern the customer very much whether you use the high-draft system in the spinning process—the high-speed warping and hot air tape machine in the preparatory processes, a tappett loom or dobby loom, or an automatic or hand loom in the weaving process—if the price, feel, appearance, strength, weaving or draping, color and other essentials in the finished article are to his requirements.

If, however, it is possible to select yarns that give the desired results in the finished article, and also possess the essential qualities for good weaving, there is a considerable advantage. For this reason, the person responsible for the purchase of the yarn for a manufacturing concern should be an expert; lack of proficiency in this department is a serious handicap to the whole concern. During a depression, the expert is often compelled to allow his better judgment to be overruled by price, but, as a rule, in normal times he pays great attention to the weaving qualities, since he is aware of the fact that the cost of production depends largely upon the efficiency of the weaving process.

### Weaving Qualities.

There are many factors to be considered in connection with the weaving qualities of cotton yarns, and it is important to point out in the first place that, although many defects arise in actual weaving, the damage has been done before the yarn reaches the loom. This remark applies more to the warp yarns than to the filling.

The preparation of the weaver's beam involves several processes, and since so much depends upon the arrangement of the threads on the beam, this is the first factor to be dealt with.

If we trace the history of the cotton trade, we shall find that the first progressive step in the early days of power loom weaving was the development of the tape-sizing frame. In fact we may safely assume that power loom weaving was not a commercial success until the pioneers had solved the problem of arranging the warp threads on the weaver's beam in such a manner that they unwound at the required uniform rate and tension necessary for successful weaving.

The weavers could only work two looms when the threads were clustered in half beers, but with a perfect sheet of yarn they were able to run four looms with less trouble.

We have much to learn by considering what this mean to the industry, and it is suggested that future progress depends largely upon the preparation of the yarn for the loom, with special attention to the filling yarns.

It is not suggested that we have not made progress in the preparatory processes; as a matter of fact, if we except the automatic weft supply mechanism, the progess in this section is considerably greater than in the actual weaving section.

It is quite easy to compile a long list of improvements in the process of winding, warping and sizing, and special attention is being paid to the sizing of cotton yarns by the scientists at the Shirley Institute.

After making due allowance for the progress in the past, and keeping in mind some of the investigations that are being carried out at present, there still remains plenty of scope for improvement in this connection.

The combination of grey and colored yarns on the same beam is by no means carried out in a satisfactory manner, particularly when a large number of ends are in the same sheet, and the weaving quality is reduced considerably.

It is very essential to have a perfect beam upon which to wind the yarn in the preparatory process, but this is a detail which is often overlooked until the trouble arises in the weaving shed.

I am quite sure that a considerable amount of progress will be made in the preparatory processes, and it may be that just as the improvements in these departments in the early days of the power loom gave an impetus to industry—extended progress at the present time may give the new industry a similar start.

We should not overlook the fact that the operative has, in the past, been an important factor in the preparation of the yarn for the beam. It may be that if the machines are made automatic, as far as is practical, it would give greater uniformity, and add to the efficiency of the processes.

The weaving qualities of cotton yarn may be reduced in the preparatory processes by (a) failure to clear or clean the yarn in winding, (b) too much strain or stretch and excessive abrasion during winding, (c) lost ends and slack ends, (d) irregulars beams and soft beams in warping, (e) imperfectly sized yarn, (f) irregular tension and uneven sheet of yarn, (g) loss of elasticity and irregular tension at the sides, (h) crossed and rolled ends, particularly in stripes, and (i) too soft or excessive hardness of the yarn on the beam in the taping process.

While on the other hand, the retention of the strength and elasticity, perfect sizing, together with uniformity in regard to tension and the sheet of yarn, will tend to improve the weaving qualities of the yarn.

Assuming that we have suitable yarn, and this has passed through the preparatory processes in a satisfactory manner, and is reay upon a well-balanced beam, provided with good flanges correctly set and collars suitable for the requirements,

(Continued on Page 34)

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# Sources of Power Losses

By Russell Byron Williams.

In a recent issue we pointed out, in similar fashion, a few of the details that constantly confront your boiler room and power engineer and which might be eating into your profits with avidity. Because of the obvious fact that "minor" details in the aggregate constitute "major" expense, and because the average mill superintendent will very justly give serious consideration to large purchases but fail to give proportionate thought to the endless details of operation, we here indicate another set of abiding places for "profit eaters"—insidious leaks of a kind that are common to all mechanical equipment, whether in this or any other department:

1. Without periodic inspection and frequent care this sprinkler head will become clogged or corroded and thereby become inoperative when need or emergency arises.

2. Due to the vibration from the floor above or from the motor itself these bolts and timbering will become loosened—which condition will result in wasted power and high depreciation.

3. At the time this motor was installed it was doubtless of the correct type and size, but if additional machines have since attached to the overhead line, the motor is either being overworked or is causing a serious waste of power.

4. Lineshafts that are out of true eat up power with startling capacity.

5. Lineshaft hangers and bearings should be looked after frequently to make certain of alignment and rigidity.

6. Woodwork should be given a protective coating of paint at least once each year. It is just as easy to apply a dull finish white paint as any other color—and much easier on the light bills.

7. This silent chain transmission is constantly exposed to the lint-laden atmosphere — which means that frequent cleaning, lubrication and care is necessary to the end of long life and service.

8. Exposed bulbs, drop cords, and lamp shades of this type do not give the greatest value for the lighting dollar. An illumination expert could here effect real lighting economy—but, even at that, the value of whatever he might install would be largely nullified by accumulated dirt and dust.

9. Belt lacings improperly done can not only cause undue stretch but seriously hamper the efficiency of the pulley.

10. Slippage of transmission belts has been known to waste as much as 28 or 30 per cent of the power produced. A loss of 8 or 10 per cent through belt slippage is quite common. This means that one dollar out of every ten paid for power is lost in transmission—never reaches the machine.

11. Window sash that does not fit tightly or weather stripping or caulking that have become loosened or out of place can impose a tremendous burden on the heating

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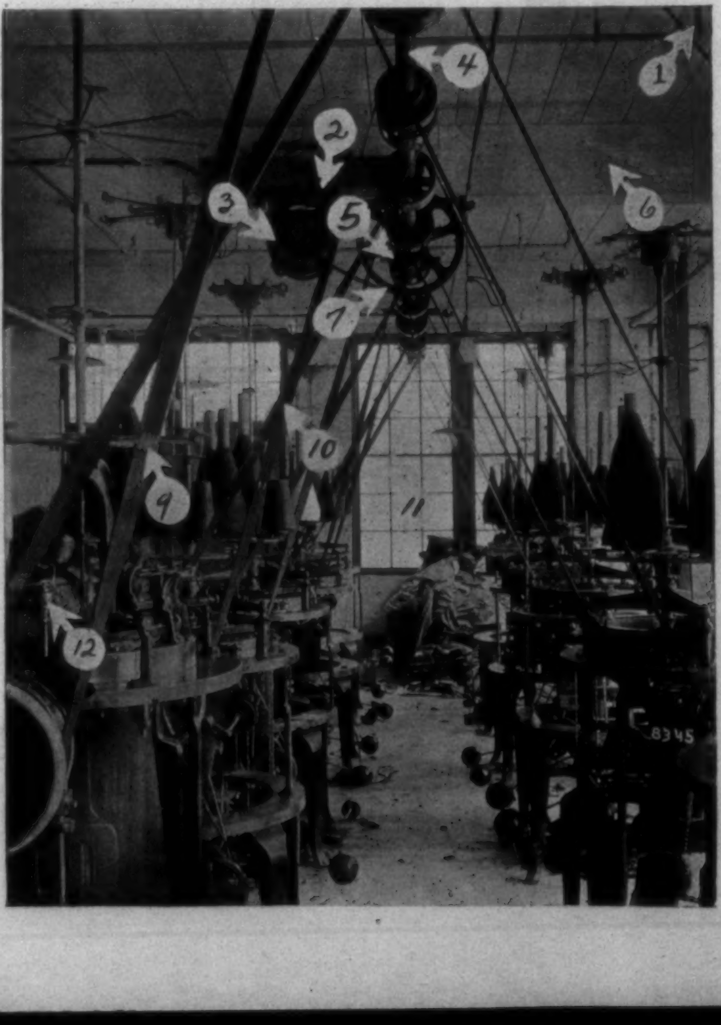

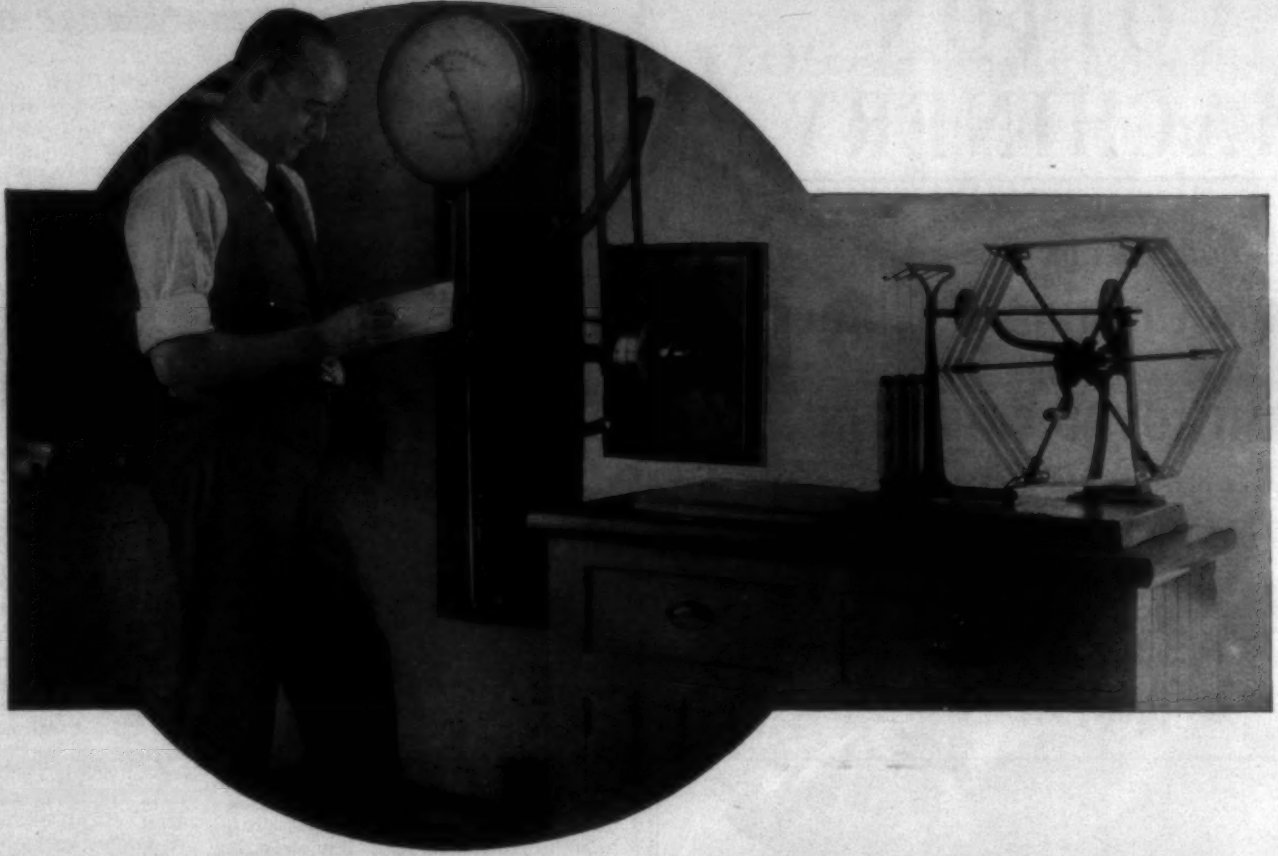

# THE CHECK-UP ALWAYS SHOWS

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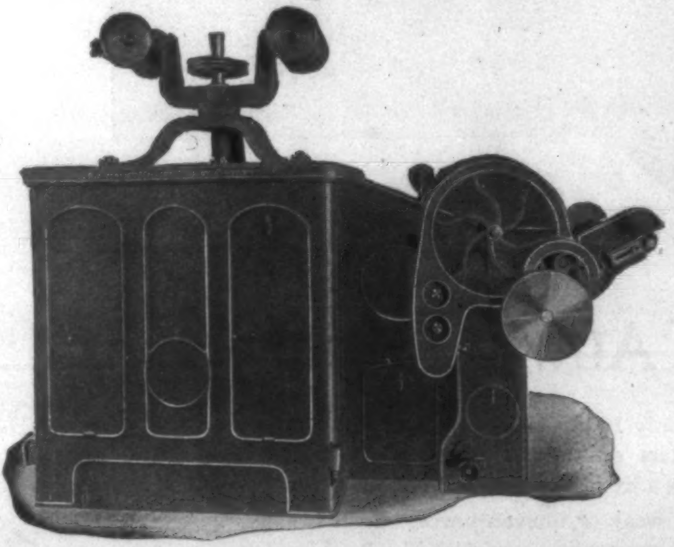

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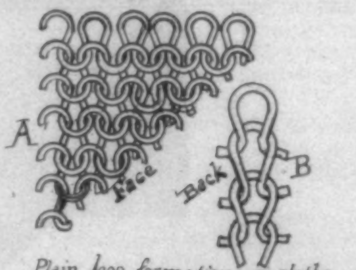
# *Productivity of Knitting Machine Widening Range of Fabrics*

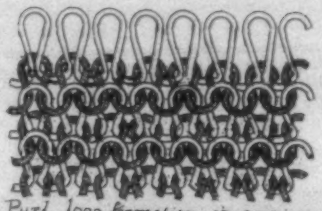
ONE of the reasons why some of the fabrics which were made exclusively on weaving looms are now made on knitting machines is due to the remarkable productivity of the latter as compared with the average textile machine. The principle on which the needles of a knitting machine is operated makes it possible to obtain great speed in the formation of the loops in a texture intended either for inner or outer wear. There is a continuity in the mechanical action of the circular machines which favors high speed and the cylinderical form of fabric thu produced can be cut to any form of yardage required for clothing or other purposes. The action of the flat machines also justifies great rapidity of movement of the needles so that some of the mills engaged in the production of knitted cloths are turning out knitted fabrics at a greater productive capacity than is possible on a regular weaving loom. Knitting machinery that used to be limited to the manufacture of hosiery and underwear, in which elasticityand lightness of stitch were the predominating features, has been substituted in some mills by knitting machinery adapted to produce cloth to be finished and used the same as woven cloth in which firmness of texture and ability to stand hard wear are necessary. Fine textures of melton variety as well as coarse textures of the heather mixture variety are made with very fair success. The latter fabrics have been made into heather mixture men's overcoatings that do not sag or lose shap when submitted to tests or when worn a considerable time.

Flannels for trousers, blanketing material, and coarsely knitted fabrics for automobile rugs have also been turned out on knitting machinery at a lower cost per yard than when produced on looms with harnesses, reeds and shuttles. But of course there are certain drawbacks. For example, one of the problems facing the manufacturers of knitted cloth is that a proportion of what is gained in production costs is lost because a better grade of yarn is required to get equal results in knitted cloth. That is, the yarn for knitting purposes should be smooth, even in structure and well spun; and in order to get such a yarn the adulterants commonly employed to cheapen cloth cannot be used very freely. A passable fabric can be made on a weaving loom with yarns composed of coarse and inferior fibers blended with a percentage of good material and this is not always the case with knitted textures although the time appears to be fast approaching when shoddy yarns can be handled with the same dexterity by needles as by shuttles. In figuring the cost of weaving it is necessary to estimate the expense of preparing the yarns for the loom, such as the dressing of the warps, the drawing of the thread into the eyes of the harness heddles, reeding the ends and kindred operations not essential to knitting, as harnesses and reeds are not used.

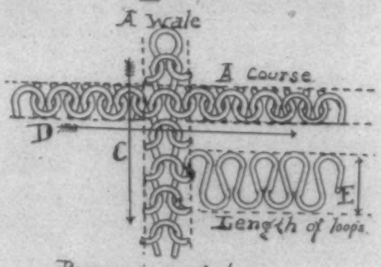
These are some of the reasons why one may find numerous samples of knitted fabrics in the markets that so closely resemble woven fabrics that the difference in the texture and finish is hardly distinguishable on a casual examination. Of course an analysis of the fabric will quickly show that the construction is based on loops symmetrically connected in lieu of an interlaced system of warp and filling threads at right angles.



Plain loop formation in cloths
Fig 1.



Purl loop formation in coatings.
Fig. 2



Dimensions of loops.
Fig 3

While much of the knitted cloth is produced by means of the plain loop formation shown in Figure 1, several other types of loop formations are used for purposes of ornamentation or development of a certain texture in the fabric. A one-color fabric of combed wool and combed coton mixed in equal proportions is made to resemble a serge in feel, weight and general character although the finish which has to be employed in order to cover the loops rather eliminates the clear, smart appearance of woven goods of the serge order. The threads are kept in a parallel position in the woven fabric while they have to bend to the form of loops in the knitted texture and this effects the finish for which serges are noted. But the soft, smooth finish which it is possible to get on the knitted cloth is as acceptable to the average wearer of this class of material as

**(Continued on Page 31)**

# *Garside Discusses European Textile Situation*

CONDITIONS and trends in the cotton manufacturing industries of Great Britain and the Continent are greatly different today from those of a year and a half ago, according to Alston H. Garside, director of the Garside Cotton Service, Boston, who has just returned from a two months' trip to Europe. In European countries where the industry was prosperous a year and a half ago it is now relatively depressed, while in others where it was then depressed or heading for depression it is now on a firmer and more prosperous basis.

"When I last went to Europe in the fall of 1925," said Mr. Garside, "the cotton manufacturing industry of Germany was running full and on a profitable basis, but there was much apprehension in the trade because of the obviously unsound economic conditions in the country and the depressed situation of other industries. It was felt that those unsound conditions would ultimately affect cotton spinning and weaving. These apprehensions were later realized, as business fell off to such an extent that mills were obliged to reduce their operations to about a 50 per cent rate. However, in the past nine months, the tide has turned in cotton manufacturing as in other lines of business in Germany, and today German cotton mills are running at full rate, are well sold ahead and are making money. It is now felt that the cotton industry of Germany is on a sounder footing than at any other time since pre-war days.

### Exchange Hurts French, Italian Industries.

"Eighteen months ago the cotton manufacturing industries of Italy and France were very active and prosperous. This, however, was on the basis of inflated currencies and low foreign exchange, giving the manufacturers of those countries an exceptional advantage in foreign markets and stimulating their domestic business. The industries of those countries are now going through the inevitable deflation process, just as other industries in those and other countries have done.

"With the recovery of their exchange, Italian and French mills have lost their advantage in foreign markets and so their export trade has shrunk. With the decline of their yarn and cloth prices, their home trade has fallen off sharply as buyers have anticipated still further declines. Accordingly, French and Italian mills are now being obliged to curtail extensively.

"One of the bright spots in the cotton manufacturing industry of Europe is Czecho-Slovakia. The mills of that country are now running at about 107 per cent of normal. During May this year, they consumed about 40,00 bales of American cotton against 25,000 in the corresponding month last year. It is expected that they will use about 230,000 bales of American in the six months ending July 31, against 158,000 in the corresponding period last year. The mills of Czecho-Slovakia have the advantage of low wage rates. The only cloud on their horizon at the present time is the tariff barriers erected by neighboring countries to which they export a considerable part of their production.

### Export Situation Hits English Profits.

"In England, conditions are not greatly different from those a year and a half ago, but developments in Lancashire in the past eighteen months have thrown additional light on the causes of Lancashire's troubles and have forced some revision of opinion in England on this subject. When I was in England, cotton prices were falling below the shilling level under the weight of the big American crop of 1925, the first big crop since that of 1914. In this situation, the cotton trade of England was quite optimistic, in the belief that cheap and stable cotton prices would lift Lancashire out of the depression which it had experienced continuously since 1921.

"During the past eighteen months, however, cotton has fallen as low as six or seven pence and at periods the cotton market has been extremely stable for weeks at a time, but Lancashire mills are still curtailing heavily and profit margins in England are extremely thin for many mills and nonexistent for others. It has become more evident to leaders of Lancashire that the difficulties of the trade are due primarily to less of export business to competing countries, very largely to Japan and India, in consequence of the low production costs of these countries.

"In the aggregate the mills of the Continent are running at a very high rate, notwithstanding the relative depression of the industries in France and Italy. Continental mills will consume about 5,000,000 bales of American cotton, exclusive of linters, this season, again 4,400,000 last season and only 2,900,000 in 1920-21. They are now back to a pre-war basis in their consumption of American, as their consumption in 1913-14 was just under 5,000,000. England, however, will consume only about 2,000,000 bales of American this season, against the same amount last season and over 3,500,00 during some seasons before the war. It should be noted that the large consumption of American cotton by the Continent is due to some extent to a shifting by spinners from Indian to American staple in consequence of the relative cheapness of the latter.

### U. S. Exports Running High.

"Shipments from this country to Europe during this season have been extremely heavy, running far beyond even the large consumption of Europe. During this season to date exports from the United States to Great Britain total about 2,400,000 bales, against 2,100,000 in the same period last year and an average of 1,800,000 in the past four years, while exports to the Continent dur-

(Continued on Page 26)

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# Practical Discussions By Practical Men

### Draft Constant.

Editor:

I have a spinning frame which is geared as follows: Front roll gear 35 T, crown gear, 100 teeth; back roll gear 35 T; front roll I inch in diameter, back roll 1 inch in diameter. I want to know what is the draft constant and what draft gear to use for 1 inch draft? Athens.

### Oiling Looms—Cloth Inspection.

Editor:

I would like to ask a couple of questions through your paper.

What is a good oiling schedule for Model E Draper looms? How many yards of cloth should a inspector grade per day of 10 hours where he has to fix all imperfections, such as as slugs, that he can? No. 506.

### Picker Feed Trouble.

Editor:

I am running a card room, and have a second hand finisher picker which I am starting. It takes four laps into one, but as these laps feed in from the apron, they seem to feed in too fast, and the web sometimes buckles before passing under the piano evener motion. How can this be remedied? Rattletrap.

### Best Time to Change Travelers.

Editor:

When changing wornout ring travelers to new ones, what is the best time to change them? That is, is it best to change them just before or just after doffing, etc?

Inquirer.

### Loss of Yarn Length.

Editor:

When making yarns that are 5 per cent too heavy, if I twist them into two-ply, do I lose more than 5 per cent of length? Curio.

### Loom Fixing and Warp Tying.

Editor:

I would like to submit to the readers of Southern Textile Bulletin, the following question and would thank your for eadly publication:

1. How many looms should a fixer be able to look after if he is assisted by a warp tyer who takes off the old warp and puts in a new warp? The fixer to look after the repair and upkeep of the looms only.

2. How many looms should a warp tier attend? His job would be to take off the old warp, make the pattern to be sent to tying-in department and put the new warp in looms ready to start the loom.

The above questions to apply to 36-inch and 40-inch looms on print goods and sheetings with 30s warp and 5 yard to 5½ yards per pound.

M. E. S. C.

*The Practical Discussion Department of the Southern Textile Bulletin is open to all readers whether they are interested in seeking information on technical questions or are willing to help "the other fellow" who has experienced trouble in some phase of his work.*

*The questions and answers are from practical men and have often proved extremely valuable in giving help when it was urgently needed.*

*The interchange of ideas between superintendents and overseers develops a great deal of worth while information that results in much practical benefit to the men who are concerned with similar problems.*

*You are invited to make free use of this department and to join in discussing various problems that are mentioned from week to week. Do not hesitate because you do not feel that you are an experienced writer. We will take care of that part of it.—Editor.*

### When Picker Apron Slips.

Editor:

I notice a question from a man having trouble because his picker apron slips. If he will get two small sprocket gears with 8 or 10 teeth and and connect his front and back apron shafts together with a small chain this will overcome all his apron slipping I am sure. I have had this trouble at two or three mills and stopped it with a spocket chain. Put the chain inside the apron where it will be out of the way. Use No. 25 link chain and sprocket, keep apron and chain tight so both will run together.

J. W.

### Answer to Color.

Editor:

I would like to answer "Color" as follows:

Answer to question one. If the drawing frames have electrical stop-motions they cannot be grounded without destroying the workings of the stop-motion. Regarding the grounding of cards and pickers, my impression is that they can be grounded, and I would consult a competent local electrical engineer who will direct and advise properly on this subject.

Answer to question No. 2: Oil-spraying not over one per cent the raw cotton in the bale breaker hopper or first picker hopper pays; because it does kill much of the electricity, lays the dust, and the cards can be started anytime. It also prevents rusting of the card clothing.

Answer to question No. 3: In addition to oil-spraying it does also pay to have humidifiers over cards and drawings, but not over the pickers. Pioneer.

### Answer to Disgusted.

Editor:

I saw an inquiry by Disgusted in regard to filling wind. I have changed to filling wind and have had a great deal of experience with it, and will try to tell him what I did. Twelve of my frames are tape driven, 4-inch gauge, 2-inch rings, no separators, 7-inch traverse, 8-inch bobbins, ⅞-inch barrel. I could not get over 120 turns on my front roll before I changed from warp wind because of the ballooning of the ends. When I changed to filling wind, I had the same trouble, except that it was worse. If I changed to suit the balloon at the bottom of the bobbin, I had trouble at the top, the ends breaking down there.

Here is what I did. I shortened the traverse from 7 to 6½ inches, changed the lay from 34 lays per inch to 43, changed from No. 4 to No. 2 travelers and speeded up the front roll 20 turns per minute in order to gain back the loss on the half inch I lost of the traverse.

I am getting good results. I would like to see Disgusted try this and let me know how he comes out. Hope that will help him out of his trouble.

W. A. C.

### Answer to New Carder.

Editor:

I have seen Carder's question asking how to mix his cotton of several different marks and lots. He wants to know how much to mix at one time and whether to use from one mark twice and whether to use fro mone mark at a time or mixing from all of the marks at one time.

Expert cotton blenders and mixers have always assumed that it is best to open sufficient cotton to last a few days ahead, and for even one week is not considered too much. Also for these mixings, it is always best to make an average mixture of as many different marks as are likely to differ some in various ways. Another good thing is, so far as is possible, to have two (2) separate piles mixed, and use only from one pile while the other pile is left standing for a few days to give it a chance to age or to become reconditioned and better adapted to the local situation. Pusher.

### Answer to Bobbin.

Editor:

Bobbin wants to know why the bobbins on his spinning frames fill larger in diameter on the same yarn number at one time than another.

Now the reason for this is because the atmospheric pressure is not always the same. The humidity is not always alike. Neither is the temperature. Although it is stated that the yarn numbers were the same, the chances are that, this will vary some without tipping the scales perceptibly. And when all of these things or some of them favor less compression or less density of winding, the bobbin will be large in diameter on some doffs than others.

Technical.

### Answer to Ark.

Editor:

Why are the weights or yarn numbers wrong in the spinning room when the roving weights are right in the carding room, and where should the change be made to get the numbers right again?

"Ark." has sure started something going when he asked the above question, and I reckon many others would like to have asked the same question. In the first place I would not make any changes until I had carefully checked the scales for accuracy, and the machines from which the work come. Sometimes the scales suddenly get out of order. Sometimes the gears get on wrong.

In one mill some gears which had been cut down from 50 teeth to 44 teeth, did not have the old number 50 removed and replaced with the number 44. After a while some of those gears were picked up and run as 50 tooth gears when all of the time they were 44 tooth gears.

If a change is needed after all has been carefully checked and proven, the place to make the change is where the conditions are found to be wrong, unless it is found desirable to make a change in the standard weight and another process where the work was found to be right.

Charlotte.

### Answer to Weaver.

Editor:

Replying to Weaver's question, would say that he has brought out a very interesting question. He wants to know why we do not add tension enough on the yarn at the spoolers so that all of the weak places would be eliminated and thus breakages at the warpers and subsequently at the looms stopped. I have read Weaver's question with a great deal of interest. In fact, I had thought of doing the same thing in my mill.

It would be very nice indeed to have enough tension placed on the yarn at the spoolers so that the yarn would be entirely free from further breakages at the warpers and at the looms. However, I have found this to be not as feasible as it looks.

This would work all right if all yarns were perfectly even and only had remote thin places. That is, a tension serious enough to break the yarn at each thin place would also break the yarn at many other places where it is not thin. In other words, yarns are not always the weakest at the thinner places. There are several reasons why it would not pay to subject any yarn to such a severe strain that it would break at each weaker point at the spoolers.

First, it would cost three or four times as much to spool. Second, it would cause too many knots and break all the more at the looms. Third, it would destroy the elasticity in the yarn.

Thousands of spots in the yarn that would be broken under tension at the spoolers never break at the warpers nor at the looms. I hope this will enlighten Weaver. Let's hear from others. Testor.

## Nineteen Textile Graduates At N. C. State

During the commencement exercises at North Carolina State College, nineteen young men, who had completed textile courses, were warded the degree of Bachelor of Science. North Carolina, South Carolina, Georgia, Alabama, Massachusetts, Honolulu and China were represented by men in the graduating class, while B. T. Kwia, a graduate of Texas A. M. College received the degree of Master Science in Textile Manufacturing. This shows that the Textile School of North Carolina State College has an international reputation.

Textile students take an important part in the college activities. During the past year the valedictorian, president of the student body and president of the senior class were textile students. John F. Matheson, who played shortstop on the baseball team and graduated with high honors, was voted the best all around man in the senior class in the competition put on by the Agromeck, the student year book. For four years out of five the president of the senior class has been a textile student. For three years out of four the valedictorian has been a textile student. Twice during the past four years a textile student has been president of the student body.

John W. Clark, president of Randolph Mills, Franklinville, N. C., and a graduate of the textile school, presented the National Association of Cotton Manufacturers medal to Franz, E. P., of Selma, Ala., valedictorian of the class of 1927. The medal awarded annually to textile students of recognized standing which are fully equipped to give instruction in all branches of the textile industry and is presented to the student who shows the highest proficiency in his work during his four years in college. This medal has been awarded to the textile school of North Carolina State College for nineteen years.

Every member of the graduating class has been placed in a textile position and Dean Thomas Nelson stated that many more could have been placed as the requests for men exceeded the number of textile graduates. Dean Nelson is enthusiastic about the future of the Southern textile industry and says it offers a wonderful opportunity for advancement to bright young men with a textile education.

The following is the list of men who received degress:

Bachelor of Science in Textile Chemistry and Dyeing: Stacy Boyd Carson, Taylorsville, N. C.; Albert Harvey Grimshaw, New Bedford, Mass. Bachelor of Science in Textile Engineering: Frank Tse-jui Chang, China; William Clarence Park, Augusta, Ga. Bachelor of Science in Textile Manufacturing: Harvey Leighton Brown, Charlotte, N. C.; John Davis Cassada, Littleton, N. C.; Macon Crawford Comer, Greensboro, N. C.; John Henry Dulin, Charlotte, N. C.; Early Andrew Feimster, Jr., Greensboro, N. C.; James Bright Griffin, Monroe, N. C.; John Leslie James, Star, N. C.; Arthur Burthbert Jones, Farmville, N. C.; Cecil Ivey Knight, Durham, N. C.; George Ehrhardt Kohn, Mount Holly, N. C.; John Flood Matherson, Cheraw, S. C.; Franz Erion Plummer, Selma, Ala.; David Alexander Purcell, Wentworth, N. C.; Marion Kirk Sanders, Columbia, S. C.; George K. Y. Tom, Honolulu.

## Textile Sales Continue To Gain

Sales of standard cotton textiles during May were nearly twice as large as they were a year ago, according to statistics for the month just compiled by the Association of Cotton Textile Merchants of New York. Unfilled orders established a new high record.

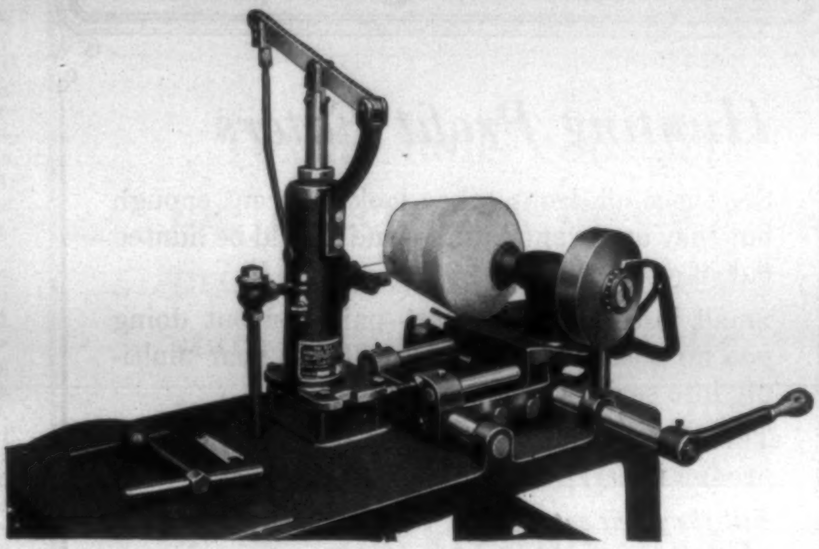
Sales amounted to 328,144,000 yards, or 141.5 per cent of production which was 231,874,000 yards. The volume of sales was 91.5 per cent larger than during the corresponding period in 1926. Unfilled orders on June 1st were 572,009,000 yards, or 20 per cent larger than on May 1st and equivalent to nearly ten weeks production at the rate of output during May.

Shipments amounted to 230,665,000 yards, or 99.5 per cent of production. Stocks on hand aggregated 177,890,000 yards May 31st, an increase of 0.7 per cent during the month.

The reports compiled by The Association are based on yardage statistics on the production and sale of more than 200 classifications of standard cotton cloths during the four weeks of May. They represent a large part of the volume of these good manufactured in the United States.

A summary showing the records of May, 1926 compared with May 1927 (000's of yards omitted) follows:

| .. | 1926 | 1927 | Change from 1926 |
|---|---|---|---|
| Production | 201,058 | 231,874 | +15.3% |
| Sales ..... | 171,394 | 328,144 | +91.5% |
| Shipments | 187,796 | 230,665 | +22.8% |
| Stocks on hand: | | | |
| May 1st. | 273,658 | 176,681 | —35.4% |
| May 31st | 286,920 | 177,890 | —38. % |
| Unfilled orders: | | | |
| May 1st | 234,252 | 474,530 | +102.6% |
| May 31st | 217,850 | 572,009 | +162.6% |



For Your Own Information

Here Is Something Worth Reading

Why slow up your cards, or double card, make extra waste and lose production, when you can, by using the Eclipse Automatic Yarn Cleaner attached to your winder or spooler, produce cleaner yarn, free from slubs and weak spots. You will turn out a better product day in and day out with less effort and less worry. When you have wound your yarn through the Eclipse Automatic Yarn Cleaner then you have done your best, you have taken advantage of the latest invention in "Yarn Making" for quality.

The Eclipse Automatic Yarn Cleaner is not an experiment, its worth is a proven fact.

The yarn trade has begun to realize and appreciate just what the Eclipse Automatic Yarn Cleaner means. Many mills are using them and are continuing to send in orders for more (some telegraph while some use the telephone).

If you are sincere and really want to improve your product write and we will send you an Eclipse Yarn Cleaner on trial, also send one of our representatives to make proper installation no matter where you are located. In writing, please mention type of winder or spooler.

*We can show you results that even a blind man can see*

ECLIPSE

**Eclipse Textile Devices, Inc.**

*Makers of the Eclipse Yarn Cleaner*

Elmira, New York

ECLIPSE—VAN NESS

RANDOM DYEING MACHINE

**Better Lubrication at *Less Cost* per month**

*Hunting Profit Eaters*

See those oil drops—they look innocent enough but they are profit eaters—and should be hunted out of your mill.

Small losses of lubricant—paid for but doing you no good as lubricant—will in a year multiply into serious profit losses.

The Unseen Dollar of Expense adds to cost of production.

*Kill the profit eaters—use*

TRADE MARK REGISTERED IN
**NON-FLUID OIL**
UNITED STATES PATENT OFFICE

MODERN TEXTILE LUBRICANT

known throughout the textile industry as the **wasteless lubricant.**

NON-FLUID OIL possesses one full lubricating value of the highest grade of liquid oil—but unlike it—NON-FLUID OIL stays in the bearing—avoiding lubricant waste.

Where NON-FLUID OIL is used, it cuts down the usual loss due to oil spotted goods—for it keeps to its job of lubricating.

A simple test will prove the value of NON-FLUID OIL for your own mill—just send in coupon for sample and bulletin, "Lubrication of Textile Machinery."

Southern Agent: Lewis W. Thomason, Charlotte, N. C.

N. Y. & N. J. Lubricant Co.

Please send bulletin "Lubrication of Textile Machinery" and sample of NON-FLUID OIL for purposes checked below:—

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# *Types of Mill Construction*

A VERY interesting and instructive paper on the various factors that govern the selection of the type of construction of Southern mill buildings was read by John A. McPherson, of J. E. Sirrine & Co., before the Construction Division of the American Society of Mechanical Engineers at a meeting several weeks ago. Mr. McPherson's remarks, in part are given below:

The building that best fulfills the requirements for the textile industry must embody in its design the following essential elements, a good site and location, strength, stiffness, and stability. The materials used should be durable and economical. Abundant light and ventilation must be provided. The hazard of fire should be miminized by proper subdivisions and controlling devices. Provision must be made for future expansion. Finally, the building should present a pleasing appearance.

Buildings for textile manufacturing should be set well out of the ground. Two to three feet is sufficiently deep for most locations.

Steel and reinforced concrete are gradually replacing timber in mill construction, and mills built today will principally embody these materials in their make-up.

The standard practice in America today for the textile industry is quite usually confined to two general types of construction. These types are what are known as "mill construction" and "reinforced concrete." The term "mill construction" as understood today in the textile world signifies a structure composed of heavy timber or steel beams and girders, on which is super-imposed a heavy plank decking. The columns supporting the beams may be either wood, cast-iron, or steel; the supporting walls of brick or concrete.

Reinforced concrete buildings are principally of flat slab type in textile mills, although beam-and-slab or some modified form of beam-and-slab construction is occasionally used.

A one-story mill building with its floor resting directly on the ground provides the ideal building for a textile manufacturing plant of moderate size where land area is available and the topography suitable.

Any machine runs best on a solid, unyielding support.

The wide beam or girder spans so desirable under today's conditions can best be met by the use of steel or reinforced concrete. The square and round wooden columns are giving away rapidly to the cast-iron or steel columns. Cast-iron columns are now accepted by the principal underwriters without question, and even the unprotected steel columns are used and accepted with mild protest.

Practical methods for treating wood against decay have been devised and at costs which justify their use.

The problem of day-light in the multiple-story building is a factor of importance. The narrower the structure, the lower the story height can be. As 14 ft. is about the minimum height for best results, buildings under 75 to 80 feet in width can use this height satisfactorily. The following story heights for buildings of various widths are recommended, and experience indicates that they are satisfactory. Widths up to 75 to 80 feet, 14 feet floor to floor; up to 100 feet, 15 feet floor to floor; up to 130 feet, 16 feet floor to floor; and up to 150 to 160 feet, 18 feet floor to floor. Multiple story structures wider than 160 feet are not satisfactory for textile manufacturing. The story heights above appy particularly to standard beam-supported floors. Where flat slab reinforced concrete is used, a maximum of one foot can be deducted from the story heights above given and still maintain a good light ratio.

Roof insulation serves the triple purpose of preventing condensation and loss of heat in winter and insuring a cooler roof in summer. Under Southern climatic conditions insulation is well worth its cost. Experience indicates that 1½ inches of cork for humidities of 60 to 70 per cent, and 2 inches of cork for humidities of 80 to 90 per cent are suitable and afford satisfactory operating conditions.

The high humidities in textile manufacturing and the steam and fumes in finishing processes are very destructive to many paints; and, to keep these surfaces looking best, special precaution must be taken to use materials suited to these conditions. Frequently it is advisable to merely prime the surface of green or treated lumber and freshly poured concrete work and then allow the surfaces to stand several months before a final paint is applied.

It has been demonstrated that, by the use of actinic and speciall prepared glass in window and overhead sash, troublesome glare can be practically eliminated.

Buildings complying with the numerous underwriters' requirements, and equipped with the standard fire protection equipment are given insurance as low as 5 to 6c per hundred dollars. Where the construction embodies proper ties and anchorage the textile plants receive, in addition to the low insurance rates, tornado and wind-storm coverage up to 25 per cent of the amount of the fire insurance at no extra charge.

## Concrete Construction.

The use of wood for the top or working floors of mills constructed of concrete, which is very desirable for the fastening of machinery and also for the comfort of the operatives, is easily taken care of by spreading a layer of tarred sand 1½ inches thick over the concrete slab. On the tarred sand is embedded a deck of 2-inch plank, which in turn provides a nailing surface for the "top" or wearing floor. The 2-inch sub-floor plank thus laid can be advantageously used first in the "form" work; and in this way permits a large salvaging of the form **materials.**

Concrete construction provides an

ideal operating floor for textile machinery, especially when the types of finished floors are as above described. The tarred sand and wood toppings provide sufficient cushion for good operation, and the rigid concrete slabs beneath this cushion support the long machines perfectly, and maintain their alignment. Looms operate very satisfactorily on concrete supporting slabs, and these machines can be installed on the upper floors without troublesome vibration to the building.

Greater opportunities for inferior workmanship are met in the concrete type of construction.

Bleaching, dyeing, and finishing work involves processes which are destructive to wood and steel. Concrete construction is decidedly the best for this class of work, as it permits the elimination of materials that are injured in the manufacturing processes. Galvanized steel window and monitor sash should be used in plants of this character and in places where an operation generates fumes injurious to concrete, the concrete surfaces should be be painted with chemic resistive paints.

Attention to the ventilation by the manufacturer is important, for by its proper regulation the trouble with condensation can be remedied and the humidity condition suitably maintained. Keeping the mill cool in the summer months is a serious problem in the South, and this can only be achieved by medium of ventilation and humidity coupled with insulation on the roofs.

Wood floors and mastic floors admit of repairs more readily than concrete, and where heavy trucking is done they are preferable to cement floors.

Southern operatives are prejudiced against working on concrete floors, and their objections must be recognized if they are to be kept satisfied.

**Comparison of Costs**

Since the buildings represent a substantial part of the plant cost, it is important that the manufacturers obtain the maximum value of utility and use in their structures. The following are some average costs prevailing today in the South; these prices include heat, light, and fire protection: One-story daylight mill construction, using treated wood beams and planking and insulated roof costs $2.20 per square foot; one-story daylight reinforced concrete construction and insulated roof costs $2.50 per square foot; multiple story mill construction using steel beams and cast-iron columns with treated roof plank and insulation on roof costs $1.80 per square foot; and multiple story reinforced concrete construction with insulated roof costs $2.10 per square foot.

## New DuPont Color

The Dyestuffs Department of E. I. du Pont de Nemours and Company, announce their new color, Pontamine Fast Blue 6GL, a very grenish shade of blue extremely useful not only for self shades but as a shading color for other fast direct blues. It is suitable for delicate and medium shades particularly.

It has good fastness to acids, alkalies, ironing and rubbing, good resistance to perspiration and stoving, and more than the usual fastness to light, water and washing for a color of this shade.

When speck dyed Pontamine Fast 6GL leaves the animal fibers practically unstained. When union dyed the wool is stained slightly. The silk of half-silk dyed neutral at the boil is left practically white in 1 per cent dyeings. Celanese is not stained.

On rayon and silk Pontamine Fast Blue 6GL produces clear greenish blues. It can be used for printing and discharges to a clear white on cotton and silk.

## N. C. Association Plans Interesting Meeting

A very interesting program for the convention of the Cotton Manufacturers' Association of North Carolina has been arranged for the forthcoming mid-summer convention of the association, which will be held at Grove Park Inn, Asheville, June 24-25, according to a letter which has been sent out by Secretary-Treasurer Hunter Marshall, Jr., of this city, to members of the association throughout the State. Among the speakers who already have accepted places on the program are Edgar Watkins, of Atlanta, outstanding authority on transportation and traffic problems, and Dr. D. W. Dyer, of Vanderbilt University, who is regarded as one of the best informed men in the country on industrial and economic questions.

Tentative places on the program are being reserved for Carter Glass, Virginia Senator and former Secretary of the Treasury; Homer L. Ferguson, president of the Newport News Dry Dock & Shipbuilding Company, and former president of the National Manufacturers' Association, and W. S. Lee, of Charlotte, vice-president and engineer of the Southern Power Company, and recognized as one of the outstanding captains of industry in the Carolinas.

Aside from the business sessions of the association there will be an attractive program of entertainment including an elaborate banquet on the night of Friday, June 24.

It is anticipated that the business sessions of the meeting at Asheville will be replete with important and interesting features. The industry is just emerging from one of the longest and most distressing periods of depression which it has ever experienced. Everyone is anxious to keep the old ship on an even keel and it is recognized that intelligent co-operation among the manufacturers must be one of the most important means of keeping the industry on the up-grade.

Among other features of the business session will be the annual election of officers for the ensuing year. The present officers of the association are: J. M. Gamewell, Lexington, president; C. C. Hill, Winston-Salem, first vice-president; Thomas H. Webb, Concord, second vice-president; J. H. Separk, Gastonia, third vice-president, and Hunter Marshall, Jr., Charlotte, secretary and treasurer.

Textile mills considering direct sales of their production in the finished state to the wholesale, the retail, or the cutting up trades, can eliminate credit risks and keep distributing costs at a minimum through using the services of the Textile Banking Company.

Sales are converted into cash immediately upon shipment of goods.

*Correspondence or interviews with reference to selling and factoring textile mill production invited.*

**Textile Banking Company**

**FACTORS**

50 Union Square
New York

# *The Fine Points of Carding*

## *A Series of Articles Contributed to a Prize Contest on This Subject*

### Number Twenty-three

I will give some of the fine points in carding that I have learned from experience. First, we must have good card clothing that is put on the cylinder and doffer at the proper tension. Cylinder clothing should be put on at tension of 390 to 400 pounds, while the doffer clothing, being half an inch narrower than the cylinder, should have a tension of 325 to 350 pounds. As much poor carding results from loose clothing on cylinder and doffer, you should never allow anyone, when clothing cards, to pull the clothing on and tack it without first pulling it on and allowing it to stretch for 7 or 8 hours. Overnight is better. Then take it off, cut taper and pull it back on at the tension mentioned above and then tack it. This keeps clothing from becoming loose, thereby saving much bad work and trouble.

Next we must have the licker-in in good shape. The licker-in wire must be sharp, not bent or damaged. Clothing on top flats must also be in good shape if you want good work.

We must have a good lap this in uniform in weight, yard for yard, to get good even carding. You must have a good card grinder to get good results. Otherwise, even with good clothing, properly put on, if it is not kept sharp and the settings properly made, you can't get good carding. Carding should be ground every 3 weeks if you are carding as much as 100 pounds daily, or more. We should not grind cards to sharpen them, but to keep them sharp. You can't get good work with dull wire. If you grind too heavy you will hook the wire, if too light you will knock off the points on the wire. It is best to grind medium, get wire sharp and keep it so.

Grinding flats must be done right to get good carding and is important as grinding cylinder and doffer. When starting to grind the card, by all means clean out fly waste under the card, take down sides of card and remove all waste around ratchet shaft and brush rod at front between flats. Strip the card and let in run until flats are clean. Then strip again to remove any cotton that get on cylinder from flats while running clean.

I will give the settings that I am using at present: Set doffer to cylinder 7 gauge, flats to 10; licker-in to cylinder 7; feed plate 12; mote knives as close as possible without rubbing, using gauge to set them the same at each end; back knife plate 7 at top and 22 at bottom; front knife plate 29 (this governs strips to some extent) cylinder screen ¼-inch at front .068 gauge at bottom, 22 at back. I have a special gauge for licker-in screen and set it to 17, then drop rib piece to ¼-inch next to mote knives; set doffer 22. The idea of these settings is to get all the dirt and fly waste possible without removing good cotton.

**Stripping.**

Cards should be stripped often enough to keep them doing good work, which depends on how much cotton you put through and the grade of cotton used. In any case, never allow them to run until the sliver shows they need stripping, nor allow the card or stripper hand to put the end up too quickly after stripping, as this makes light sliver. Cards must be kept clean to get good work. Allow no fanning while the card is running. Use a brush, or for cleaning the fronts, a piece of card strip held in the hand is fine. It will wipe the card off without getting waste and lint in the work.

Oiling is important and must be done right. Do not allow the oiler to pour oil all over the card around the oil holes as this will be detrimental to the work. Oil that runs down from the cylinder bearings onto the screen will make trouble and make the cleaning hard. A good card hand is essential. Even with grinding, setting and everything else done right, if card is not properly operated the result is bad work. Laps should be laid so as not to make a heavy or light place in the sliver. In most cases, inexperienced operatives coming into the mill are put to work to learn to run cards. We should get away from that practice as the cards are the most delicate machines we have and more depends upon them than upon any other machine in the mill. Carding is the foundation of good roving and good spinning. Do not let card hand becomes careless about their work and let laps run through, thereby bruising the wire and bending the screens.

The brushes on the cards need attention and should be kept in good shape. They are there for a purpose when in good condition. Have the grinders inspect the cards every morning, examining all sliver and finding out whether all cards are doing good work. If any card is not doing good work, find the trouble at once and fix it. The overseer should take time to go over the cards himself every day or so to see for himself just what kind of work they are doing. Examine the fly waste as it is taken from the cards and see what the card is doing along that line. Have stripper or card hand report any damaged places at once.

Cards should never be run with cylinder bearings worn badly, as this results in vibration which in itself is enough to keep you from getting good work. Keep the card room temperature around 80 degrees, and the humidity at 55 to 60 per cent. Cotton does not clean well when damp. Don't allow flats to get gummed up with foreign matter. Keep them clean and burnished to get the best work. Also keep the stands for flat grinder adjusted right so you will grind flats level and straight from edge to edge. There is an adjustment for that and from end to end. Of course that is done by setting the flat grinder the same at each end.

A draft of 100 or 110 is good for carding and to get good work you should not card over 90 to 100 pounds per card per day of 10 hours. Just a word about speed of cylinder. The cylinder should make 165 r. p. m., or not over 175 r. p. m., licker-in 400 or not over 450 r. p. m.

One of the Boys.

**VICTOR MILL STARCH — The Weaver's Friend**

It boils thin, penetrates the warps and carries the weight into cloth. It means good running work, satisfied help and one hundred per cent production.

We are in a position now to offer prompt shipments.

**THE KEEVER STARCH COMPANY**

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**L. J. CASTILE, Charlotte, N. C.**

## Number Twenty-four

In clothing cards it is essential to good carding that the proper number of wire be applied to cylinder, doffer and flats. That is, if very low dirty stock under middling tinges for coarse counts are to be carded the range of wire should be 70s to 80s on cylinder, 90s to 100s for doffer and flats. If better grades than middling cotton for medium to finer yarns are to be carded the wire range should be 90s to 120s for cylinder, 100s to 130s wire for doffer and flats. After this has been determined select a good quality of 2-inch fillet for cylinder, 1½-inch for doffer, the card builder taking care of flats at the factory. While builders furnish the clothing, buyers may name quality to be used.

Have cards perfectly level, all plugs and surface made smooth, bearings fitted so that cylinder and doffer may rotate freely in absence of heating or friction, have temperature of room in which the clothing is done 72 to 78 degrees F. Place and inspect condition of clothing machine so that no accident may occur from that source. Begin at left hand side, either front or rear of card (front preferably) and wind spirally across applying 350 to 400 pounds pressure and allow to stand for several hours if it is convenient. When clothing is removed and first inside taper is cut as follows: Cut in center 75-inch pull wire tapering 18-inch cut tapering to the rib, pull wire tapering, and cut as above to and including 8th rib or full width fillet. This will allow 10 inches for stretch at the shoulder. Good carders are fussy about tight selvages. After clothing has been tacked sufficiently hold pressure at 200 pounds until 5th rib has been reached where pressure is increased 25 pounds for each rib until 400 pounds is applied to full width and shoulder is made fast before cutting on opposite side for next taper in a similar manner, laying fillet about one-eighth of an inch away from edge of cylinder to avoid contact with arches and clothing later on. Have clothing rubbed over hard surface to make sure wire is in place. Use stove-polish, or graphite on full length of clothing, tacking only at ends and shoulders until clothing stands for a few hours when it is tacked every other spiral in pairs at cross rows plugs.

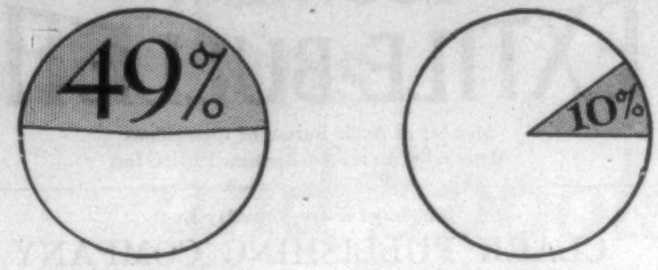
The doffer is clothed in like manner with inside taper length of cuts for taper being governed by the diameter of doffer to be clothed and applied at 150 pounds pressure for tail ends and 300 pounds for full width. Cut tapers true to avoid jagged edges on foundation. Place dead or drum grinder—roll lightly to fillet for a few hours then a little heavier until surface of cylinder and doffer are smooth as glass. When traverse grinders are applied for finishing the points sharply there can be no rule applied as to time required for grinding other than to get wire sharp (good carding can never come from dull wire) regardless of its perfect settings.

The duty of a card is to remove short fibers and foreign matter as well as to straighten the fibers to some extent, but it does not do nearly so much straightening of fibers as is supposed by many. So it is important to present the best of laps at cards for best results. See that sides and end doors fit frames tightly and are packed under so that no air or draft can escape or be admitted to any part of cylinder or licker-in. Have guides for laps set so that cotton will not escape teeth of licker-in at ends this will choke-up the shroud causing heated bearings and waste of good stock also. Allowing fibers to float and accumulate at cylinder arches causes waste, bad selvages in the web at doffer.

There are many arguments as to setting feed plates. My idea is local conditions have a big influence. Also the stock to be used and whether light or heavy carding. I would set to 12 gauge for a lap 10 to 12 ounces, 15 gauge for 12 to 14 ounce lap. See that the nose of plate is kept free from corrosion at all times and licker-in teeth in good condition this is where good or poor carding begins. Set mote knives to licker-in on 7 gauge, with top of bevel slightly nearer than the bottom or heel. Set licker-in to cylinder on 10 gauge for medium to heavy work and 7 gauge for light work, licker-in screen at nose (or side next to cylinder) on 12 gauge, and one-sixteenth to one-eighth inch at feed plate side according to length of fibers to be carded. This is important on account good staple being wasted in mote boxes. Set cylinder screen at back to 17 gauge, middle to 34 gauge, front one one-sixteenth or one-eighth inch according to staple in use. Set back-plate to 17 or 22 gauge, set flats at all points to 10 gauge (if vibration in floor does not interfere) unless carding very light for extra cleanliness set to 7 or 9 gauge. Set front knife-plate to 34 gauge, stripper-plate to to remove desired weight strip. Range is about 17 to 22 gauge for strip 18 to 21 grains per flat. Set stripper comb to 12 gauge, doffer to cylinder 7 gauge for light to medium carding, 10 for heavy. Set doffer comb to 15 or more, if it will comb the web as well as saving a jam to wire in case of a bung-up. See that all web deliver at same tension by adjusting comb blades for that purpose. Do not run spiral brush below knee of wire, this is one cause of felting in flats. Grind flats as often as cylinder and doffer. Remember the duel between the wire and give each an even chance to do its work. Never allow more than 10 or 12 cards to be ground without renewing the emery. Regardless of its apparent good condition the cutting qualities are gone.

If flats are given to loading up or felting, change your emery from 40s to 7s and grind over using a cleaner (spirally wound about 5-inch spread) before grinding and give wire good burnishing after grinding. The laying of laps should be done carefully to avoid heavy places in sliver. It is best to have one-fourth yard of waste from each lap than to admit the extreme ends to enter the card. Where vacuum is used for stripping have the stripper used on cylinder and doffer at least once a week. How often should one grind a card? Just before it needs it. A dull wire will

(Continued on Page 28)



Active Spindles Bleaching and Finishing

*What is wrong with this picture?*

WITH 49% of the nation's active spindles located in the cotton-growing states—only 10% of the country's bleaching and finishing plants are south of the Mason-Dixon line.

Piedmont Carolina finishing plants and bleacheries are working at capacity—and there are good reasons for their profitable activity. Among these reasons are:

Abundant water from mountain streams, economical power, a steady supply of willing and intelligent labor and active demand from the 64% of all southern spindleage that is located right in the Carolinas.

Logically there should be a close parallel between cotton goods output and bleaching and finishing capacity. Until such a balance is established, new plants coming here will have *unusual opportunity* for continuous and profitable operation.

Many similar situations in other lines offer out-of-the-ordinary chances for large profits.

Why not get the facts that apply to your individual interests?

*Our Industrial Department, Room 1103B, Mercantile Building, Charlotte, N. C., gladly places its facilities at your service. Write.*

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*OWNERS OF SOUTHERN POWER COMPANY, SOUTHERN PUBLIC UTILITIES COMPANY AND ALLIED INTERESTS*

DAMAGED PAGE(S)

SOUTHERN
TEXTILE BULLETIN

Member of Audit Bureau of Circulations
Member of Associated Business Papers, Inc.

Published Every Thursday By
CLARK PUBLISHING COMPANY
Offices: 18 West Fourth St., Charlotte, N. C.

THURSDAY, JUNE 16, 1927

| | |
|---|---|
| David Clark | *Managing Editor* |
| D. H. Hill, Jr. | *Associate Editor* |
| Junius M. Smith | *Business Manager* |

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## The Opportunity Is Theirs

THIS is the season when the graduates of the various textile schools pass from their class rooms to take their places in the industry. Some of them will go direct to the mills, others will go with the machinery and supply houses as salesmen and engineers. Still others will find their places in the dyehouses and the bleacheries and in the plants that manufacture dyestuffs and chemicals. They will scatter into every nook and corner of the textile industry.

Some of these boys will make good, others will fail. Some of them will meet with every encouragement in their newly found jobs. Others will be handicapped because they will fall in among that rapidly decreasing number of mill men who believe that a textile graduate belongs anywhere except in a mill.

We know that the prejudice against textile graduates that was noticeable in many mills a few years ago has about dwindled away. It was perhaps natural that many superintendents and overseers who had never had an opportunity of securing an education should resent the coming of the technically trained men. Many of them felt that they were up against unfair competition and failed to realize that there is plenty of room for both the practical and the technical men. Others felt that the business of operating textile machinery was entirely a matter of practice, that there was no place for theory. They failed to appreciate that the combination of theory and practice should work out in an ideal combination.

A part of this prejudice against the men from the textile schools was of course due to the men themselves. The "know-it-all" type of graduate, and there were a few of them, did much to put the best of their fellows under a cloud.

However, there is no doubt that within recent years, the textile graduates have found their place in the sun. They have made good, many of them under very difficult circumstances. They have supplied the answer to the question as to whether or not a textile education was of practical value. The best evidence of this is in the number of them who are filling responsible places in Southern mills, and filling them with credit to themselves and to the industry. If any additional evidence of the value of the technically trained man to the industry is needed, it is shown by the fact that the demand for textile graduates is now greater than the supply.

Dean Thomas Nelson, of the textile department of North Carolina State College, tells us that every one of his graduates was given a textile position before the school term ended, and that he could have placed many more had they been available. We are sure that this condition was true of all of the other textile schools.

Each year the equipment and the quality of instruction at the textile schools is being improved. The schools are striking the proper balance between theory and practice. The men in charge are making every effort to turn out the kind of graduates that the industry needs and are being helped through a much closer co-operation that is being given by the mills.

It is true that the textile industry now offers a wonderful opportunity to the young men from the colleges. It is also true that this opportunity exists only for those who adopt the proper attitude toward their work. The textile graduates must realize that in leaving school they have only begun to learn. When they combine their technical training with actual experience they will have an equipment that should carry them far.

The commencement orators have just finished showering the textile graduates with all manner of advice. They have had pointed out to them the things they should do and the things they should avoid. We don't believe, however, that they can be talked into success. That lies within the limits of their own abilities. After all, giving a boy an education is a good deal like tempering a piece of steel. Some steel can be tempered, some cannot.

If we were called upon to offer a word of advice to the textile graduates, we would point out to them that here is one other factor that is just as essential to success as theoretical training and actual experience. We would leave with them this thought: No matter how much you have learned in school, no matter how much ability you may show in putting this knowledge into practice, your real value to any concern that employs you rests largely with your ability to get along with people.

No man, regardless of how well he is fitted by training and experience, can ever get far in his chosen field if he lacks the ability to get along with those with whom he is associated in his daily work.

## Arkwrights Gaining Recognition

IT has long been recognized that the English textile industry is much more interested in textile research than the industry in this country. The research work in England is well organized and is being carried out upon a much broader scale than anything the American mills have yet attempted.

Inasmuch as the English mill men apparently place a much greater value upon textile research, we are particularly glad to note that the Textile Institute of Manchester, Eng., has taken note of the work that is being done by the Arkwrights, the research organization of the Southern Textile Association.

In the May number of the Journal of the Textile Institute, of Manchester, England, the official organ of the several research organizations in the British textile trades, we note brief reports on the tests that were made by the first four men to secure membership in the Arkwrights.

The Arkwrights have been in existence only a comparatively short time, but have already succeeded in doing work of such value that it is recognized by the British associations which are admittedly more actively engaged in research than the textile associations in America.

We feel sure that the recognition thus given the Arkwrights will be of particular interest to its members and to the textile industry as a whole.

Elsewhere in this issue we are publishing reports on four more tests made by Arkwright members and feel sure that the information they contain is well worth while.

## Market Situation Is Encouraging

THE situation in cotton goods continues very encouraging. Business this year has been very much larger than last year and as a whole the outlook is much brighter for continued good trade through the year than it has been in several years.

Figures compiled by the Association of Cotton Textile Merchants of New York show that the sales of standard cotton textiles for May were nearly twice as large as they were a year ago. Unfilled orders have reached a new high record. May sales were 141.5 per cent of production and the volume of business was 91 per cent greater than in May, 1926. In spite of the continued large production, stocks on hand showed an increase of only 0.7 per cent.

Most of the mills making cotton goods are well sold ahead and now have the advantage of operating in a market where raw material prices have been steadily rising, a condition that is in striking contrast to that prevailing for some years past.

Yarn trade is still far from satisfactory, but is showing some signs of improvement. If spinners will hold for prices and avoid the overproduction of former years they have an opportunity of a good summer business, something they have not known for years and years.

## "This Is Cotton Year"

SOMETIME ago, Donald S .Shaw, advertising manager of the Hunter Manufacturing and Commission Company, originated and copyrighted for his company the slogan, "This is Cotton Year." It has been very effectively used in connection with the advertising of the company.

Walker D. Hines, president of the Cotton-Textile Institute, was so impressed with the possibilities of the slogan that he suggested to the Hunter Manufacturing and Commission Company that the slogan be made available to the entire trade. The company very generously agreed to do this.

As Mr. Hines said, "Often a condition of mind has been changed for the better by some direct and clear cut slogan." The power of suggestion that lies in a few well put words is one of the strongest forces in advertising. A good slogan often works wonders in putting over an idea.

The slogan "This is Cotton Year" is peculiarly appropriate for use in textile advertising and should prove a very effective factor in increasing the demand for cotton goods. Mr. Shaw is to be congratulated upon its authorship and the thanks of the industry are due the Hunter Manufacturing and Commission Company for making it available to the textile trades.

# Personal News

Chas. P. Roberts is now secretary of the Dover Mills, Shelby, N. C.

D. W. Royster has resigned as manager of the Janet Hosiery Mills, Shelby, N. C.

T. D. Pickell is now manager of the Janet Hosiery Mills, Shelby, N. C.

J. J. Queen has resigned as superintendent of the Chadwick-Hoskins Mills No. 3, Charlotte.

N. H. McGuire, of Calhoun, Ga., has accepted a position with the Shelbyville Mills, Shelbyville, N. C.

L. C. Hamrick is now overseer of weaving at the Buffalo plant of the Union-Buffalo Mills, Buffalo, S. C.

H. M. Miles has resigned as assistant superintendent of the Judson Mills, Greenville, S. C.

L. R. Beaman, formerly of the Watts Mills, Laurens, S. C., is now with the Victor plant of the Victo Monaghan Company, Greer, S. C.

W. T. Brown, of Clinton, S. C., h accepted the position of overseer weaving and cloth room at the komis Mills, Lexington, N. C.

C. B. Buchannan has resigned overseer of weaving at the L Manufacturing Company, Hu ville, Ala.

P. B. Mullins has accepted the sition of overseer of weaving at Lowe Manufacturing Compa Huntsville, Ala.

B. F. Morgan has become over of carding at the Lumberton p of the Mansfield Mills, Lumber N. C.

A. W. Lee is now overseer of N spinning at the Lumberton plan the Mansfield Mills, Lumberton, C.

Lee Stallings is now overseer of No. 2 spinning at the Lumberton plant of the Mansfield Mills, Lumberton, N. C.

Harry Smith has been appointed secretary and treasurer of the Fountain Mills, Tarboro, N. C. He is also secretary and treasurer of the Hart Mills.

C. W. Bolick, who recently resigned as overseer weaving at the Wearwell Sheeting Mill, Draper, N. C., has gone into the automobile business at Draper.

W. W. Gregory has resigned as overseer of cloth room at the Aragon-Baldwin Mills, Whitmire, S. C., and accepted a similar position at the Inman Mills, Inman, S. C.

H. L. Lanier, who represents the National Ring Traveler Company in Georgia and Alabama territory, is spending two weeks at the Southern headquarters of the company in Charlotte and will attend the meeting of the Southern Textile Association this week.

N. J. James has resigned his position with the Irene Mills, Gaffney, S. C., to become overseer of carding at the Henrietta Mills No. 1, Henrietta, N. C.

F. M. Tidwell has resigned his position at the Watts Mills, Laurens, S. C., to become assistant superintendent of the Judson Mills, Greenville, S. C.

R. D. Dillard has resigned his position with the Whitney Mills, Spartanburg, S. C., to become overser of the cloth room at the Aragon-Baldwin Mills, Whitmire, S. C.

D. I. Williams, superintendent of the Chadwick-Hoskins Mills No. 4, Charlotte, will also act as superintendent of the No. 3 plant for the present.

Wm. Miller has been promoted from overseer of carding and spinning to superintendent of the Lumberton plant of the Mansfield Mills,

[redacted]

Spartanburg, S. C.—A meeting of the executive committee of the South Carolina Cotton Manufacturers, which took place here recently at the Cleveland Hotel, was for the purpose of making plans for the annual meeting of the association, to be held in Asheville, July 1.

## Represent Neutrasol Products Corp.

John M. Barr & Co., Whitin Building, Charlotte, N. C., well known to the Southern textile trade, have secured the appointment as Southern representative of Neutrasol Products Corporation, 41 Park Row, New York City, N. Y., manufacturers of textile oils and sizings.

The various products of the Neutrasol Products Corporation have won an enviable reputation in the North and in the South, their Neutrasol V-75 for soaking natural silk and Neutrayon for lubricating artificial silk have been used with much success for some time by a number of the more prominent mills.

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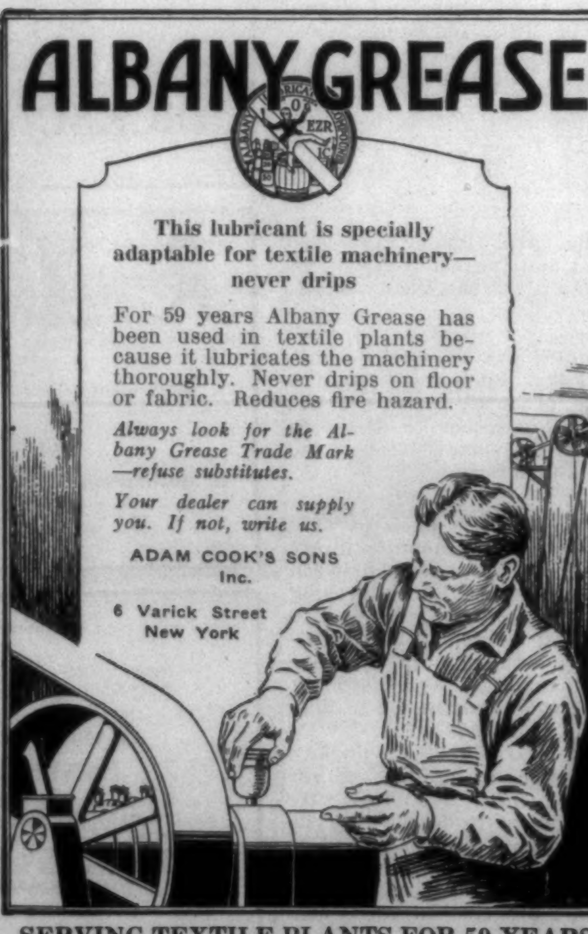

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*Your dealer can supply you. If not, write us.*

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Inc.
6 Varick Street
New York

SERVING TEXTILE PLANTS FOR 59 YEARS

# MILL NEWS ITEMS OF INTEREST

**Acworth, Ga.**—It is reported that the Unique Knitting Company will erect an additional mill building.

**Anniston, Ala.**—It is reported that the Anniston National Bank has taken over the Woodstock Cotton Mils here and the Calhoun Cotton Mills, Calhoun, Ga.

**Commerce, Ga.**—The Kiwanis Club is making efforts to have a textile mill locate here.

**Kinston, N. C.**—It is reported that a new company is being organized to take over and operate the Kinston Cotton Mills. The matter is being handled by Birch Douglas.

**Iva, S. C.** — Work is progressing rapidly on the three-story addition to the Jackson Mills and will probably be completed within six weeks. The addition is 100x75 feet.

**Burlington, N. C.**—Contract for the erection of the boiler house at the National Dye Works has been let to Potter & Shackleford, Greenville, S. C. J. E. Sirrine & Co. are the engineers.

**Cleveland, Tenn.** — The Debonair Hosiery Mills have let contract to erect an addition that will increase the floor space by 4,500 square feet.

**Fort Worth, Tex.**—The Worth Mills of Fort Worth have been incorporated to take over and operate the Worth Mills, according to reliable information here. The new company has a capital of $1,200,000. Chas. L. Harding, of 77 Franklin street, Boston, Mass., is president and D. D. Towers, who has been agent for the mill, is vice-president. The plant makes tire cord.

**Magnolia, Ark.**—Plans have been completed and the contract will be let on June 22 for the Magnolia Cotton Mill.

The proposed plant is to have 5,000 spindles and will operate both night and day. Plans were drawn in the office of J. E. Sirrine & Co., Greenville. No Greenville firms are bidding for the construction of the plant, it is understood.

**Gastonia, N. C.** — The Gastonia Weaving Company, manufacturers of woven labels is spending between $50,000 and $60,000 for improving its plant. The company is adding 10 new jacquard looms and making alterations in their building. The warping, winding and quilling equipment will be increased to take care of the additional looms.

It is expected that the company will erect another building within the next 18 months and install sufficient equipment to double its production. The mill was established in 1925 and has built up a large business. The labels are mostly woven from 140s, 2-ply combed yarns and 140s 2-ply filling.

**Charlotte, N. C.**—The Lambeth Rope Corporation, of New Bedford, Mass., is considering plans for establishing a plant here for making spinning tape and bands.

**Charlotte, N. C.**—Sixty jacquard looms will be operated by the Pinoca Manufacturing Company, near here, when operations are resumed about June 15, according to an announcement by the company's engineer, Dwight Seabury, who said the mill would make high-grade broad silk and tapestry. The number of looms eventually will be 640, he added.

**Greenville, S. C.** — The Dunean Mills have declared a semi-annual dividend of 1¾ per cent on the preferred stock, payable July 1.

**Franklin, N. C.**—It is reported that a textile mill is to be established here by A. T. Wilde, of Acworth, Ga., and K. L. Jones, Healey Building, Atlanta, Ga.

**Rutherfordton, N. C.**—The Dean Manufacturing Company has been incorporated with a capital of $25,000 by J. E. Mason, M. D. Haney and M. D. Haney, Jr.

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We'll gladly prove to you the truth of these statements . Send a card for samples and measure the mileage of Victors against your present travelers.

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Complete Topographic Surveys
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Supervision of Landscape and Engineering Construction
Largest Landscape Organization in the South

**Greensboro, N. C.**—The Swimsafe Bathing Suit Company, which was incorporated here June 7, has leased the top floor of the old Cone Export and Commission building on West Washington street and will operate a plant to meet an increasing demand for the product.

At a recent meeting of the company's incorporators, Clarence E. Anderson was elected president, Frank F. Clarke, vice-president, Robert H. Frazier, secretary, and George L. Hall, treasurer.

**Concord, N. C.**—Construction of a two-story addition to the Brown Manufacturing Company here, adding approximately 32,000 square feet in floor space to the building, will begin at once, according to announcement by Harvey Moore, secretary and treasurer. The addition calls for an expenditure of $40,000 or more. The Brown company is a member of the C. W. Johnston chain of mills. The headquarters of the chain are in Charlotte. The local plant manufactures cotton flannels principally.

The addition, according to Mr. Moore, will ultimately double the present capacity output of the mill. However, for several months the irst floor of the new section will be sed for the finishing division, while he second story will be used as a torage room. The addition calls for wice as many looms as the plant as at present.

**Montgomery, Ala.** — Contract for onstruction of the Southern plant f the West Boyleston Manufacturng Company, of East Hampton, lass., near Montgomery, was let to he Batson-Cook Company, of West Point, Ga., by the consulting engieers of the West Boyleston Company, Robert & Co., of Atlanta.

The plant, which will be located a few miles from Montgomery, will cost approximately $750,000, and the contract calls for the immediate construction of the main mill building and the mill village. The contract for the additional features of the plant will be awarded as rapidly as possible, Mr. Robert stated. Stuart Johnson, president, and G. Arthur Cook, treasurer of the West Boyleston Manufacturing Company, were present at Robert & Co.'s offices when the contract was awarded.

**Anderson, S. C.**—That the general condition of the Anderson textile industry is far ahead of that at this time last year is the opinion of most of the operators interviewed here.

According to James P. Gossett, president of Toxaway, Riverside, Ladlassie, Williamston and Calhoun Fall Mills, those plants are operating on a 110-hour week basis with two full shifts, nad expect to continue throughout the summer on that schedule. Present production of these mills, Mr. Gossett said, was approximately 4,000,000 yards per month and will total between 40,-

000,000 and 50,000,000 yards for the year.

The Appleton Mills, according to D. D. Little, treasurer, are enjoying much better business than last year.

**Durham, N. C.**—The new building of the Golden Belt Manufacturing Company, built for the expansion of its full fashioned hosiery department, is completed and the new machines are being installed.

The company has had 12 full fashioned machines working for some time, and 22 will be added. The new building is built as an addition to the building housing the present unit of machines.

The concern also manufactures seamless hosiery, this department being located in another building. Other products of the company are bags and labels for smoking tobacco.

## S. T. A. Golf Tournament

A very interesting golf tournament for the meeting of the Southern Textile Association in Asheville Friday afternoon is being arranged by W. B. Moore, of the Charlotte office of Allis-Chalmers Manufacturing Company, who has charge of the event. A number of cups will be warded to winners in the tournament. These cups are to be donated by the National Gum and Mica Company, through Sam Rakestraw, Southern representative; E. H. Best & Co., through Fred Crowell, Southern representative; Allis-Chalmers Manufacturing Company, through W. B. Moore, manager of the Charlotte office; New York and New Jersey Lubricant Company, through Lewis Thomason, Southern manager; and Joseph Sykes Bros., through Walter Pratt, Southern manager. The firms that will present other cups will be announced later.

There will be one prize for the longest drive, one cup for the lowest gross score and the second lowest gross score, one for the low net and the second low net score.

Four small cups will be given to the winners on the State teams, it being planned to have teams entered from the several States represented at the meeting.

There will also be cups to be awarded as follows: Lots will be drawn for five holes and the players having the lowest score on these holes will be given the prizes.

Much interest is being shown in the golf tournament and a large number of players are expected to enter. Those who expect to play should get in touch with Mr. Moore at the Kenilworth Inn as soon as they reach Asheville.

## Ask Uniform Cost Accounting

Spartanburg, S. C.—A meeting of the advisory committee of the Narrow Sheetings Group of the Cotton-Textile Institute, Inc., was held here Friday at the Cleveland Hotel, with W. J. Vereen, of Moultrie, Ga., chairman of the committee, presiding. The members of the committee present in addition to Mr. Vereen were: H. B. Jennings, president of the Union-Buffalo Mills, Union; Lee Rodman, president, Indiana Cotton Mills, Cannelton; Allen F. Johnson, vice-president, Consolidated Textile Corporation, Lynchburg, Va.; Victor M. Montgomery, president, Pacolet Manufacturing Company, Spartanburg; J. C. Evins, president, Clifton Manufacturing Company, Spartanburg; Aug. W. Smith, treasurer, Brandon Mills, Greenville.

George W. Duncan, cost engineer, and Paul B. Halstead, statistician of the Cotton-Textile Institute of New York, also were present. Mr. Vereen reported to the meeting that he had just come from a conference with Walker D. Hines, president of the Institute, in New York, from whom he learned that the new uses statistical and cost accounting work of the Institute is under way and that these services are now available to the group as a whole.

After a full discussion of cost problems relative to the manufacture of narrow sheetings, the committee voted to recommend to the Institute that Mr. Duncan undertake a study at the earliest possible time of the cost systems now employed to the end that the mills may be better enabled to consider the practicability of making progress at this time toward greater uniformity in cost accounting.

The committee gave consideration to the bringing to a greater degree of completeness the statistics already available on narrow sheetings and it was recommended that the Institute make every effort in co-operation with the association of cotton textile merchants of New York to place in the hands of the mills of this group a summary of the weekly production, stock on hand and unfilled orders during the past two years.

## 5,500 Miles of Crepe

The American woman during the past few years has completely metamorphosed her wardrobe from the cottons and woolens of pre-war days to the silks of today according to a statement just issued by the Stehil Silk Corporation.

This firm has in four years manufactured 161,000 sixty-yard pieces of one quality, called French crepe. This means 9,660,000 yards, or approximately 5,500 miles, of silk fabric. Of this material 2,800,000 dresses were made. The huge part the silk worm had in this undertaking is indicated when one realizes that the cocoon ends required to weave the cloth extended 3,800,000,000 miles, or 36,000 times around the earth. This record is believed to be the largest weaving of a single type of fabric in the world's history. The manufacturer did not incur loss on a single yard.

## Biggest Blanket Season

"Every employe of the Pepperell Manufacturing Company, Lowell Division plant is working just as hard as possible to help fill the tremendous orders for blankets which are piling up there," says the current issue of the Pepperell Sheet.

"Never in the history of the mill has there been such a large and insistent demand for the Massachusetts blankets as there has been this season. The demand seems to be rather evenly spread over the country.

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*The Standard Textile Belting*
USED throughout the Industry
*BECAUSE*
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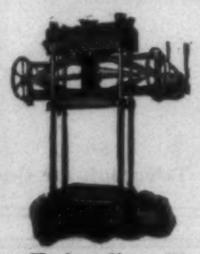
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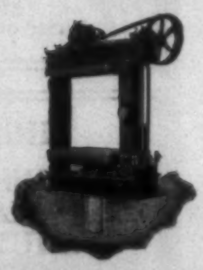
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## Garside Discusses European Textile Situation

(Continued from Page 15)

ing the season to date are about 5,500,000, against 4,000,000 in the same period last season and an average of 3,400,000 in the past four seasons.

"The excess of shipments over consumption is due primarily to buying for stock by the European trade in consequence of the low price and basis earlier in the season, but to some extent it is the result of consignments by exporters in this country. Stocks of American cotton at ports of Great Britain and the Continent are now very high, totaling 2,200,000 bales, against about 1,000,000 at this time last season."

## Thirty-six Wholesalers Agents for Pacific Sheets

A new plan was recently put into effect for the distribution of Pacific Mills sheets and sheetings on a basis affording advantages to the retailer, wholesaler and the company. Co-operation is the keynote of the plan. One of its principal advantages is that it eliminates from retail selling, so far as Pacific Mills sheets are concerned, a situation known as "footballing," or in other words such keen price cutting on sheets that retailers have been much of the time selling without profit and even at an actual loss. Under the Pacific plan the sheets are sold on a quality basis, says an article in the Pacific Mills publication.

The company has appointed wholesalers to act as its distributing agents and they are the sole agents in their respective territories. These agents give exclusive sales franchises to selected retail stores—no more than one store in a community receiving the franchise.

Each retail store places an order for the estimated quantity of goods which it will sell over a period of three months. The company supplies the wholesalers with sheets and sheetings to take care of these orders and the retail stores draw on the wholesalers only for the goods needed to meet the consumer demand.

The retailer benefits by the opportunity to build up a business for quality goods at a legitimate profit, by having price protection against market advances or declines in each three months' period, and through it being unnecessary to carry more goods than will take care of current business. He is also assured of a ready supply of sizes and kinds, and the company co-operates with him in promoting the sale of the goods.

Advantages to the wholesalers and the company result from the stabilized market for the goods and the elimination of retail trade handicaps that have worked to the disadvantage of the sheet business in the past. The co-operation between retailer, wholesaler and manufacturer means better service for the consumer and quality merchandise at favorable prices.

Thirty-six wholesalers representative of the foremost jobbing houses throughout the country are now operating as Pacific agents under the new sheeting plan and hundreds of stores, including many large and prominent ones, have obtained the sales franchise for the goods.

A rough survey indicates that nearly 33,000,000 people can be reached under this system of distribution, representing a potential market for nearly 80,000 cases of goods, which is more than any mill's capacity.

## Dyeing Rayon

As a general rule all the cotton dyestuffs are suitable for the dyeing of rayons with the exception of acetate rayon for what we have to do with in these rayons is a more or less pure form of cellulose Basic dyestuffs are employed when it is desired to produce as brilliant colorings as possble on the rayon fiber. Nevertheless the low degree of fastness of these dyeings is a disadvantage and tend to curtail their use. The sulphur dyestuffs may also be used for the dyeing of rayons with the exception of acetate rayon. For this form of rayon is injured by the strong alkalinity of the dye liquor. The disadvantage incurred in the use of the sulphur colors is brought about by the formation of sulphuric acid which has a destructive action on the fiber. This is the reason why decomposition of sulphur takes place when the fibers are placed in intimate contact with sulphur dyestuffs, and the sulphur being present in the finely divided colloidal condition is converted into sulphuric

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acid. Whether this fact is so or not, it remains that when the rayon fibers are dyed with sulphur colors they suffer from the formation of sulphuric acid and there have been developed quite a number of different processes whose purpose is to counteract this action.

The important step in the process is neutralization with a basic substance; nevertheless its value is always limited either by the fact that it is consumed by the excess of acid or that it is removed in the washing. When sodium acetate is employed as the neutralizing agent, then the presence of free acetic acid can be immediately told by the odor arising from the dye liquor. If in spite of this disadvantage the sulphur dyestuffs themselves are used for the dyeing of costly fabrics, which can stand the use of vat colors without special treatment, then there is a certain advantage gained in the process due to the fact that the sulphur dyestuffs are cheap and are generally very fast to light. In addition thereto it is a comparatively easy matter to produce such a color as jet black on the rayon fabric used in large quantities with the aid of sulphur colors, while the use of vat dyestuffs is scarcely considered from this standpoint.

It is then very evident that there must be some means developed for bringing the sulphur colors on the rayon fiber in such a manner that no subsequent deposition of sulphur ensues and the formation of sulphuric acid is avoided. Thus it may be possible to substitute another solvent for sodium sulphide. The idea also suggests itself that a compound which would be fast to washing and which would not affect the dyeing itself in any manner and at the same time, however, prevent the formation of sulphuric acid. There could then be many ways in which the injurious actions of the sulphur dyestuffs could be avoided.

There is also a certain difficulty in obtaining uniform dyeings with sulphur dyestuffs on rayons. This is not due to the fact that it is a difficult matter to bring the dyestuffs on to the rayon fiber, but just because this groups of dyestuffs reacts so to speak with every irregularity of the surface of the fiber, and irregularities will of course occur in the rayon fiber especially in the case of viscose rayon. It is however possible to overcome this difficulty to a considerable extent by treating the viscose rayon, before it is dyed, with soap and sodium perborate at a temperature of 50 to 60 degrees C, and then washing it several times with hot water. It has been found that this process is not only advantageous in dyeings with the sulphur dyestuffs but also in the rayon with vat dyestuffs. For in the latter case it yields brighter dyeings. A similar effect can also be obtained by adding substances to absorption of the dyestuffs by the absorptio nof the dyestuffs by the fiber.—Rayon Journal.

## New Textile Specifications.

New specifications on jute burlap, cotton tablecloths and other materials, have been issued by Federal Specifications Board to be effective September 10. All purchases by any department or independent establishment of the Government after that date must be on the basis of the new rules.

## "Link-Belt Typical Elevator" Book

The Link-Belt Company of Philadelphia, Chicago and Indianapolis have just issued a new publication entitled "Link-Belt Typical Elevators." The book consists of 44 pages of illustrations, examples, ratings, capacities and tables showing how to select typical elevators.

The elevators described in this book are applicable to average conditions for handling practically all materials in bulk.

Where conditions are suited to the use of any of the elevators shown in this book, there is the advantage of quick shipment, lower price, (quantity production — no special drawings needed), and a corresponding reduction in time necessary when ordering parts is also accomplished.

For convenience in selecting elevators they are divided into classes governed by the nature of the material to be handled.

Classs C elevators are used for handling coal and other nonabrasive materials weighing approximately 50 pounds per cubic foot. The chains used are of the Ewart Detachable, or the "C" class. Where the service is light or intermittent, Ewart Detachable Link-Belt should prove satisfactory, but where the service is more continuous and severe the "C" class chains are preferable.

Class "C" elevators are used for handling ashes and other abrasive materials weighing about 40 pounds per cubic foot. They are usually furnished with steel casings as this prevents abrasive dust from circulating. The chains used are of the "C" and the latter where the service is more continuous and severe. The "800" class is particularly applicable and preferable for hard service, and where the material is very abrasive.

Class "S" elevators are used for handling either abrasive or nonabrasive materials weighing about 100 pounds per cubic foot. They are recommended for heavy materials and hard service.

There are two general types of typical elevators in common use, known as the centrifugal discharge and continuous bucket types. The information given in this book will be helpful in connection with the selection of the proper elevator.

Copies can be had by addressing the Link-Belt Company, 910 S. Michigan Avenue, Chicago.

## Cotton Consumption Larger

Cotton consumed during May totalled 633,025 bales of lint and 72,766 bales of linters compared with 619,140 of lint and 66,957 of linters in April this year and 516,376 of lint and 65,199 of linters in May last year, the census bureau announced.

Cotton spindles active during May numbered 32,906,580 compared with 32,892,442 during April this year and 32,275,036 during May last year.

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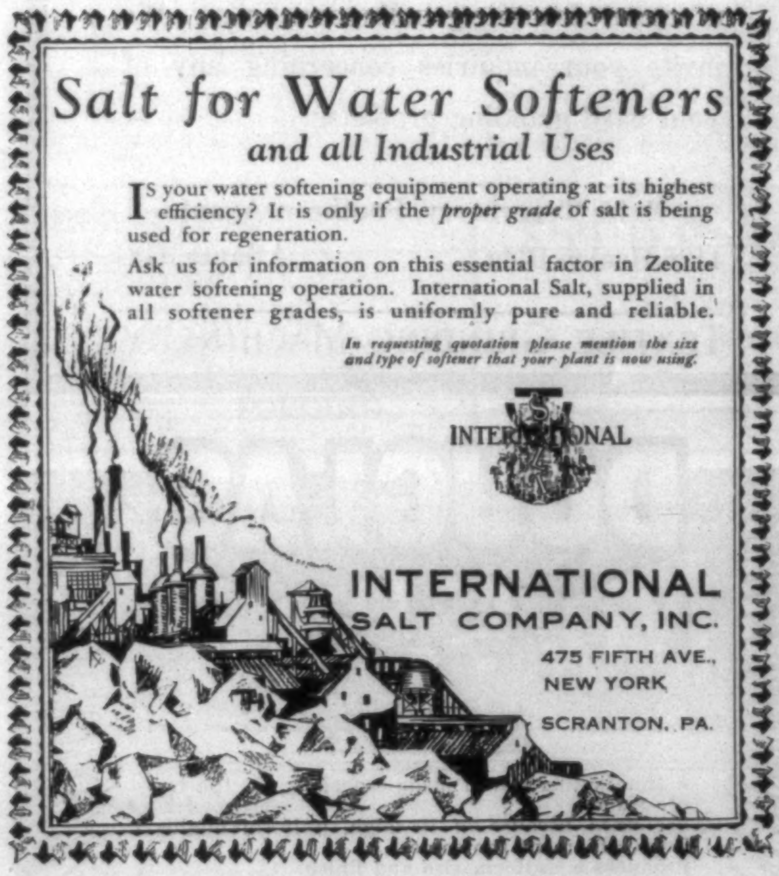

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## The Fine Points of Carding

(Continued from Page 21)

warn you by the fuzzy or rough appearance of the web and sliver. All wire is not of the same temper and some requires grinding oftener. Examine the fly and strip from cards to assure yourself the cards are not extravagantly set. Have cleaning done periodically enough to stay clean; have an experienced man do oiling, avoid its getting on surfaces of cards by wiping any overflow while oiling. Get and keep a good grinder. Require of him loyal efficient service to you and the cards. Weigh sliver often. Sliver varying 3 to 5 grains is not alarming. Dull licker-ins and loose clothing have been the downfall of many a so-called carder.

Zip-Bang.

## Number Twenty-five

In entering this contest, I understand that it covers carding only and there are many points to consider in the articles. To make proper preparation for the grinding operation, the first thing to do is to cut out the feed, take lap out of the way and let the card run about 15 minutes. Then strip it well and clean both cylinder and doffer. Then start it up and let it run until all flats are clean of strips. Then stop the card and clean out all fly and motes from underneath, also clean out all chokes around the doffer and cylinder. Now take off the belt and disconnect the feed gears. Remove the big gear from the doffer. Scrape all mashed places in the clothing and belt the cylinder to run backward and the doffer to run the usual way, except belted for a higher speed. Belt the flats to run in the usual manner. Then brush out both cylinder and doffer with a long, soft hair brush that is provided for that purpose only.

Now stop the card and put on the grinders on cylinder and doffer and flats. Set the grinders to the wire at each grinding point to a No. 7 gauge. To prevent the wire from coming in contact with the fillet and knocking it off, we must band the grinders. If possible, use only one band by using the binder pulley. This applies to the grinders where they are geared up at the other end and when it is not in this position above use another band on the other end by adding a band pulley on the doffer shaft to drive it.

Now put the flat or drum grinder on and start the card. Set grinders on cylinders so as to make a few sparks, but not too heavy. Set the doffer to grind a little lighter than the cylinder because it does not have as much surface to cover. Grind the flats a litte heavy, but not enough to produce sparks and be sure they are set even all the way across. Otherwise, one end will be ground high and the other low and will make much trouble setting the flats and may ruin them completely. I think many card grinders have made mistakes in the number of hours they grind the cards. I recommend 8 hours good grinding, done in daylight and do not believe in letting grinders run over night. The grinder should be present and give the cards his careful attention. I know some card grinders contend that a card cannot be ground in less than 24 hours. I don't agree with this, for if you grind that long, the points are ground away. All that is necessary is to get a good point on the wire and 8 hours is sufficient.

Now I will give the details of the cards. I suggest a cylinder speed of 160 r. p. m., doffer 6 r. p. m. We have cut our small pulleys on the end of licker-in shafts down to 2¾ inches and have a 14 production gear, using a 12-ounce lap, making a 45-grain sliver. I am giving the best and most practical points on the best carding we have done which has increased our breaking strength 6 points. We did this with the speed mentioned above and the settings given below.

In setting the doffer, we use a No. 7 gauge; licker-in to cylinder 7; mote knives, bottom 7 and top 10 gauge; feed plate 12 gauge; back screen to 22, bottom 29 and front ⅛-inch. Flats are set all the way across with a No. 7 gauge; breast plate No. 22; back side front breast plate at top 22, bottom full; doffer comb full, stripper comb 12; licker-in screen to cylinder No. 10 gauge.

We find these settings remove a great deal more of foreign matter than before. We are using Arizona cotton and our settings are said to be the best for this grade of cotton in any mill on our section.

### Operating the Card.

In laying down the laps, I recommend laying down a whole line at a time. If you have to break out any pieces, save them until the next run starts and piece them in to make all of them run out as near together as possible. Have a set time to doff the cards and never let them break out. I recommend the following rule for the grade of work we are on: Doff every 2 hours and strip the card at 6, 10 and 2 o'clock and at the same hours at night. Clean out motes and fly every day and night and oil cards once a day. Oil comb boxes once a week with a good grade of non-fluid oil, using nothing else for the purpose. Clean cards twice a day, morning and afternoon and never let a card hand use a flap to fan off the cards while in motion. This will cause a lot of fly and foreign matter to get in the web and make thick and thin places in the sliver.

You should have the best card hands you can get for the job, the whole mill depends on good work from the card room. I do not recommend the use of inexperienced hands on cards and then always have a good man with them when it is necessary to use new help. When you strip and put up ends at the calendar roll, be sure to pull out all unclean sliver and piece it together again. A tender should not let the laps run through. They should be watched and at least 12 inches broken off of each end. A lap should not be pieced together too heavy, as it will make a heavy place in the sliver, but it should also be so that it will not make a thin place.

Hard Boiled.

## Number Twenty-six

I am a practical carder and would like to enter your contest on "The Fine Points of Carding."

There are many point to discuss on this subject and a great many for us as practical operators who have to make out with the different layouts and machines which we have under us. There are a great many men who are fine carders and who know how to produce fine carding, but are handicapped to a certain extent and cannot remedy the difficulty. The officials of the mill who buy the machinery sometimes make a great mistake in equipping the different process. One process will be overworked while the other can run along O. K.

I would like to state right here that we need better cleaning equipment in our older mills. We need good machines in our picker rooms and we need sufficient machines so as not to rush them and overwork them to keep the machines which follow in operation.

The picker room could be a great help in fine carding if we had it so arranged with enough machines that we could give it a good cleaning at least four times a year. That is, remove all calendar rolls and feed roll screens and give them a real good cleaning.

Now coming to "The Fine Points of Carding."

We should have our cards on a good level floor, well braced underneath and overhead, so that if possible, there would be no vibration. Level the card lengthwise and sideways—have them perfectly level—and have a capable man to look after them and grind them. The cards must be ground level all the way across the face of the cylinder and doffer and if you have the doffer and cylinder wire ground level across the face you can get a perfect setting at this point—between the doffer and cylinder.

Another point in fine carding is to have the top flats ground level across the entire face. Never let one end get ground off lower than the other. If you have the top flats ground level you can get a perfect setting at this point— flats to the cylinder. The licker-in should be sharp at all times and should be level across the face so that we can get a perfect setting at this point—licker-in to cylinder.

The mote knife plays a very important part in fine carding. There different angles to set it which will give fine results on different grades of cotton. It should be made of good material so that it will not give and be bruised or burred by the licker-in. The feed plate should be used according to the staple cotton being run, so that when the licker-in is doing its work it would not have to pull the fibres of long cotton too far before taking it from the feed plate lip and not have to take it too quickly when you are running short staple cotton. The lip of the feed plate and the mote knife and licker-in should deliver the fibres to the cylinder in just as straight a condition as possible. When the licker-in delivers the fibres to the cylinders in this condition, the top flats have a better chance to card them out, straighten them, and separate the uneven fibres which are too short to go ahead in the good stock. While stock is being delivered to the calendar rolls do not stretch it at this point. The lap roll at the back of the cards should be so regulated that it would unwind the lap to feed the feed roll and not cause the la pto be stretched at this point.

Now the great point in fine carding is the setting of the different parts through the card. As I said before the grinding and setting of a card is an art. A card is set by the sense of feeling. Two men could take a gauge and their feel of a different setting would differ to some extent. They would have a sense of a different feel with the gauge, therefore it is an art. Have a good man to do your card setting. Give him the different settings and don't let anyone else set the cards. A good sharp card which is leveled well and set right will do fine carding provided its stock is properly worked and cleaned and has the right weight before the card gets it. We know that a card can't do it all. It can't remedy something that machines before it have done.

Another point in fine carding is cleaning the cards. The card should never be fanned or blown off while the stock is passing through it. This will cause it to pick up short fibres which have already been thrown out. Keep the card as clean as possible. Keep it well oiled and clean out the cylinder and doffer as often as necessary, and with the different suggestions that I have made, you will have as fine carding as can be made.

Carder.

---

## Hosiery Production Greater

Hosiery production in April was greater than in the same month last year, 4,416,689 dozen pairs, contrasted with 4,179,300 dozen pairs, according to reports from 255 identical establishments received by the Census Bureau. Shipments and new orders were larger and cancellations and unfilled orders at the end of the month showed a decrease.

Reports from 276 identical establishments representing 342 mills showed a production of 4,507,130 dozen pairs in April compared to 4,992,122 dozen pairs in March.

April showed a decrease in shipments as compared with March, stocks on hand increased. new orders decreased, cancellations decreased, and unfilled orders at the end of the month showed an increase.

Comparing April with March, there was an increase in the production of all wool, merino and mixtures of silk and wool, silk and other fibers, and rayon and wool, and a decrease in the other classifications.

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Pepperell Mills made 25,000 miles of cloth during 1926, says the Pepperell Sheet, and they used 40,000 bales of cotton to do this.

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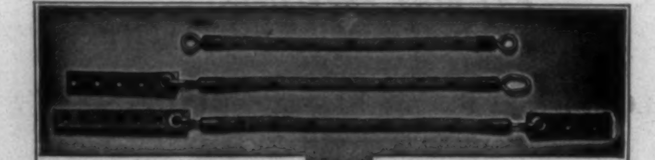

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| Newburger Cotton Co. | 30 |
| Newport Chemical Works, Inc. | — |
| N. Y. & N. J. Lubricant Co. | 18 |
| —O— | |
| Oakite Products, Inc. | — |
| —P— | |
| Page Fence & Wire Products Assn. | 34 |
| Parker, Walter L. Co. | 31 |
| Parks-Cramer Co. | — |
| Penick & Ford, Ltd. | 27 |
| Perkins, B. F. & Son, Inc. | — |
| Philadelphia Belting Co. | — |
| Pocasset Mfg. Co. | — |
| Polk, R. L. & Co. | — |
| Powers Regulator Co. | — |
| —R— | |
| Reeves Brothers, Inc. | 36 |
| Roessler & Hasslacher Chemical Co. | — |
| R. I. Warp Stop Equipment Co. | — |
| Rice Dobby Chain Co. | 35 |
| Rogers Fibre Co. | — |
| Roy, B. S. & Son | 27 |
| —S— | |
| Saco-Lowell Shops | — |
| Scott,Henry L. & Co. | — |
| Seaboard Ry. | 32 |
| Sellers, Wm. & Co. | — |
| Seydel-Woolley Co. | 38 |
| Shambow Shuttle Co. | — |
| Sirrine, J. E. & Co. | — |
| Slaughter, G. G. | — |
| Sonneborn, L. Sons | — |
| Sonoco Products Co. | — |
| Southern Ry. | 33 |
| Southern Spindle & Flyer Co. | — |
| Southern Textile Banding Mill | — |
| Spaulding Fibre Co. | 10 |
| Spray Painting & Finishing Equipment Sales Co. | — |
| Stafford Co. | 44 |
| Staley, A. E. Mfg. Co. | — |
| Steel Heddle Mfg. Co. | — |
| Stein, Hall & Co. | — |
| Stone, Chas. H. | 32 |
| Sydnor Pump & Well Co. | 35 |
| —T— | |
| Terrell Machine Co. | — |
| Textile Banking Co. | 19 |
| Textile Finishing Machinery Co. | 2 |
| Textile Mill Supply Co. | 43 |
| Timken Roller Bearing Co. | — |
| Tolhurst Machine Works. | — |
| Tripod Paint Co. | — |
| United Chemical Products Co. | 43 |
| —U— | |
| U. S. Bobbin & Shuttle Co. | 13 |
| U. S. Ring Traveler Co. | 28 |
| Universal Winding Co. | 28 |
| —V— | |
| Victor Ring Traveler Co. | 24 |
| Fred'k Vietor & Achelis | 24 |
| Vogel, Joseph A. Co. | 39 |
| —W— | |
| Washburn | — |
| Watts, Ridley & Co. | — |
| Wellington, Sears & Co. | 36 |
| Westinghouse Electric & Mfg. Co. | — |
| White, Fred H. | — |
| Whitin Machine Works | 3 |
| Whitinsville Spinning Ring Co. | 34 |
| Wickwire-Spencer Steel Corp. | — |
| Williams, J. H. Co. | 33 |
| Wilts Veneer Co. | 34 |
| Wolf, Jacques & Co. | — |
| Woodward, Baldwin & Co. | 36 |
| William & York Wilson | 37 |

**Make an Investment in Appearance**
***Cheerful Grounds make Cheerful Workers***
**LINDLEY NURSERIES, Inc.**
**Pomona, N. C.**
*Nurserymen—Landscape Architects*

## Productivity of Knitting Machine Widening Range of Fabrics

(Continued from Page 14)

the more thready and bare finish of a regular serge.

The serge or other cloth made on a knitting machine with this plain loop formation will have two surfaces that differ materially as can be judged by examining the nature of the mechanical structure of the loops in the section marked A and representing the face and the structure of the loops constitute the back and the linear components the face. While the back of the fabric will show parallel lines through the texture, the face will appear to be quite flat and smooth. If the cloth made with plain knitted loops were to be worn as underwear, the wearer would be more comfortable if the face were placed inside instead of on the outside of the garment, because of its greater smoothness as compared with the ridged surface of the back. But the underwear manufacturer has to please the sales commission houses and the consumers by showing the best side out. But this point is not important if the goods are for outerwear as the canvasses and linings commonly used in outer garments will intervene.

In some cases fabrics other than the serge class are made with this stitch and ornamented with stripes in the direction of the courses by introducing differently colored yarns. A number of cloths have been made with medium gray, brown and black, half cotton and half woolen yarns, knitted to form horizontal stripes on a white or colored ground.

A-tweed fabric has been produced with ten needles per inch with Saxony yarn spun on the woolen system and dyed in the wool. Sufficient fulling is given to assure a full handle and weight, and just enough raising to afford a chance for the shears of the cropping machine to level the pile. Steaming and pressing follows.

### The Purl Loop Useful in Certain Lines of Cloth.

The purl type of knitted loop shown in Figure 2 is another stitch formation which is applicable for use in the production of cloth owing to its mechanical sturcture. The character of the groundwork of the longitudinal loops afford a means for the development of design effects in the curved portions of the stitches. Hence, in addition to utilizing this stitching plan in fabrics intended for use as cloth it is employed with success in knitting glove material, scarfs, caps, childrens outer wear and ladies' coats. Physical conditions that make the purl stitch suitable for this line of fabrics prevent its use in underwear or any fabric which requires uniform elasticity in all directions. The purl stitches stretch more longitudinally than laterally. Purl stitches are made on the plan of plain knitting without reversing, consisting of connecting one row of loops on one side of the fabric and the next row on the other side.

Hence the courses are in parallel rows on two planes in the fabric. variations in the design are obtained by connecting the loops in one of the courses in a different way to the other course. That is, some can be connected to the back and some to the front of each system of loops so that a pattern can be wrought on the face of the goods with some of the back loops, or on the back of the goods with some of the face loops. As a firm fabric is needed if the goods are to be used as cloth, a stiffening of the tension or a shortening of the loops so that there will be about twenty or more courses per inch will be necessary. In this case a yarn can be selected that will work with moderate ease on the needles and at the same time stiffen the loops. But if a fewer number of courses per inch are made it will be necessary to use yarn as coarse as can be carried by the needles without causing breakage of both needles and yarn. It must be remembered that the stiffer the tension the less the contraction of the knitted fabric when it leaves the needles. This class of cloth is supposed to be well milled so as to cause the stitches to lose what might be called their individuality and unite into a firm cloth similar in detail of structure to the woven type. The fabric is usually wet raised and dampened as it passes over the teasels of the gig on the card clothing of the planetary or other kind of napping machine. The finishing is conducted similar to that used on any dress faced goods unless the worsted finish is wanted in which case the fabric is dry raised and the nap cropped close enough to partially reveal the textural nature of the knitted loop. A velvet finish is made by raising the pile damp, followed by tentering and drying to get the nap to stand straight out from the body of the goods. Shearing follows, thus leaving a velvet-like surface which conceals the stitches and makes the cloth appear free of any form of thread evolution or interlacing.

### Dimensions of Loops.

It is frequently necessary to get correct dimensions of loops when striving for firmly knitted textures in fabrics. The measurements can be made with sufficient accuracy for all practical purposes on the plan shown in Figure 3 in which the width of wale is calculated on the basis of the space intervening between the two lines extending longitudinally through the piece in the direction of the arrow C. The course is similarly estimated in size on the basis of the space between the two lines extending horizontally through the fabric in line with the arrow D. The length or height of the stitches is estimated on the basis of the space E between the two lines extended in a like direction below.

---

## SWIMMING POOL WILL BE OPEN AT WOODSIDE SOON

Greenville, S. C. — Announcement was made by Steve Knight, in charge of activities at Woodside while W. M. Grier, welfare head, is at Wildwood Park, this week that the Woodside swimming pool is expected to be open for the season Thursday, June 3rd.

– DEPENDENCE –

Profits in most manufacturing plants depend on the steady operation of production units.

LEATHER BELTING is the most economical medium of power transmission, and directly contributes to profit account.

"AKRON" Leather Belting comprises all the various types required in industry. Its super-strength, combined with flexibility and pulley gripping surface, insures maximum machine speeds at lowest transmission cost.

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Seaboard Air Line Railway
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Round trip fare Charlotte to
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Tickets will be sold for all trains Friday June 17th; good returning to reach original starting point prior midnight June 21st.
For tickets and other information apply to nearest Seaboard ticket agent, or to
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For use on all kinds of Knitted and Woven articles, including Rayon Underwear, Corsets and Rubber Goods, Blankets, Hosiery, Bathing Suits, Sweaters, etc.
ASK ABOUT OUR NEW STYLE 60-ABB MACHINE
For simultaneously trimming and joining with a Flat Butted Seam the ends of Cotton, Woolen or Silk Piece Goods for Subsequent Processing.
THE MERROW MACHINE COMPANY
20 LAUREL STREET, HARTFORD, CONN., U. S. A.

## Reports on Four Tests Made By Arkwrights.

(Continued from Page 8)

Note—Allowing a tolerance in variation of 5 per cent, that is, 2½ per cent each way from average number or approximately one-half number each way, the allowed tolerance is

| | | | | |
|---|---|---|---|---|
| Per cent lighter than tolerance | 20.50 | 18.00 | 19.50 | 24.25 |
| Per cent heavier than tolerance | 17.25 | 18.00 | 20.25 | 25.00 |
| Per cent within tolerance | 62.25 | 64.00 | 60.25 | 50.75 |

The sense of the tolerance is to see which roving will make most yarn within a given range of variation.

Breaking Strength—

| | | | | |
|---|---|---|---|---|
| Number skeins broken | 400 | 400 | 400 | 400 |
| Average breaking strength | 85.53 | 89 | 86 | 86 |
| Per cent of skeins broke above average | 47.75 | 44.50 | 48.25 | 50.75 |
| Per cent of skeins broke below average | 52.25 | 55.50 | 51.75 | 49.25 |
| Standard breaking strength of this yarn | 88 | 88.50 | 88 | 89 |
| Per cent broke standard or better | 27.75 | 53.25 | 32.00 | 30.00 |
| Per cent broke below standard | 72.25 | 46.75 | 68.70 | 70.00 |
| Five % tolerance allowed, under standard, gives us | 83.60 | 84.07 | 84.60 | 84.50 |
| Per cent under tolerance | 20.50 | 15.25 | 26.50 | 29.25 |
| Ends down per 100 spindles | 1.227 | 1.754 | 2.105 | 2.398 |

### NOTES AND COMMENT

It will be noticed that in changing the twist in the roving there was change in weight of the roving, it becoming lighter with each reduction of twist, the standard being 2.90 hank, as follows:

| | Test No. 1 | 2 | 3 | 1 |
|---|---|---|---|---|
| Twist | 2.48 | 2.37 | 2.26 | 2.12 |
| Weight of roving | 2.90 | 2.92 | 2.96 | 2.98 |

But for some unaccountable reason, this did not hold good in spinning the yarn, there being practically no difference in the number of the yarn spun from each kind of roving, the tests showing as follows:

| Test Nos. | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Number yarn | 21.80 | 21.72 | 21.84 | 21.65 |
| Extreme variation— | | | | |
| Lightest | 23.15 | 23.31 | 23.26 | 23.81 |
| Heaviest | 20.00 | 20.00 | 20.07 | 20.00 |

The extreme variation is practically the same on each test. This is comparatively of less importance than the percentage of yarn made nearest to standard number, which is shown as "Per cent within tolerance." The tolerance being arbitrarily set as 2½ per cent variation each way, that is, on heavy side and on light side of actual average number of yarn, which is shown as follows:

| | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Per cent within tolerance | 62.25 | 64.00 | 60.25 | 50.75 |

In this particular case Test No. 2 shows highest.

It will be observed that Test No. 2 shows the best breaking strength also, it being as follows:

| | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Per cent broke standard or better | 27.75 | 53.25 | 32.00 | 30.00 |

| | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Ends down per 100 spindles per hour | 1.227 | 1.754 | 2.105 | 2.298 |

From the above Test 1 shows best running work, it being considerably the lowest.

This test was made from one-inch middling Western Cotton, with variation in length of staple from 15-16ths to 1 1-16th inches. The roving was run on speeder, one kind of twist following another immediately; in fact, all tests made from same creel of intermediate roving.

The above test is submitted as the findings from this applicant. The results are not intended to be conclusive, as we expect to compile numerous similar tests from others in different sections and under different local conditions to arrive at a conclusive result before announcing a definite conclusion.

The Arkwrights welcome criticism and suggestions of the methods used in making this test.

## Consumption of Cotton in South Gained 2,500 Per Cent in 50 Years

By Harvie Jordan

In 1870 the South produced four millions bales of cotton and spun in Southern mills only 200,000 bales, while the balance of the United States, mostly New England, consumed 800,000 bales, or four times the consumption of Southern mills. Fifty-six years later the cotton belt production reached the stupendous yield of 18 million bales, or an increase of 450 per cent.

In the cotton year of 1926-27, the Southern mills will consume approximately five million bales, or an increase of 2,500 per cent in the past half century. New England mills will consume this cotton year about 1,650,000 bales, an increase of only 100 per cent in fifty-six years. The Southern States, principally the Carolinas, Georgia and Alabama, spin and manufacture more raw cotton into yarns and cloth than any other cotton textile section in the world. They consume more American cotton than all of Great Britain and the Continent of Europe combined.

Southern mills are now consuming annually 25 per cent more raw cotton than was produced in all of the Southern States in 1870. Practically one-half of all the spinning spindle now in operation in the United States are housed under the roofs of Southern mills. "We grow it and spin it," is a slogan which the South can well adopt without fulsome praise. The South has increased its cotton acreage over 400 per cent in the last 50 years. With the exception of corn, the present acreage planted to cotton is much larger than that of any other crop in the

United States. The area in cotton is 20 per cent greater than the entire national area of what or oats. There is no other country in the world which has been able to produce a uniform grade of short staple inch in volume to compete with the Southern staple.

The South controls a world monopoly of the great white staple and has nothing to fear from successful competition. To grow it and spin it for a profit to the growers and spinners is an economic problem based upon intelligent production, marketing, consumption and distribution. The correct solution of this problem should have the best co-operative effort of the growers, spinners, bankers and all allied business interests of the South and nation.

## Sources of Power Losses

(Continued from Page 12)

plant. In like measure, windows that are dirty can greatly enlarge the lighting bill.

12. Workmen who forget to trip this little oil cup when the machine is started or who use the wrong grade of oil may cause the management a loss many times greater than the possible profit through their productive work.

13. Indicated here is an inexpensive little utility, filled with an inexpensive lubricant, and which is easy to handle. Unfortunately they are sadly neglected by some engineers and foremen, notwithstanding the fact their judicious use means long life and continuity of service for machinery and larger profits for the management.

## Details of Goods Production

Washington.—Production of cotton goods in the nine classes reported to the Department of Commerce by the Association of Cotton Textile Merchants of New York for the mills they represent showed an increase of 14.9 per cent in April as compared with the same month last year and a larger total than in January or February of this year, but 14.4 per cent smaller than in March, according to statistics made public here. Stocks at the end of April were 34 per cent smaller than in April, 1926, and unfilled orders were more than twice as much.

With the figures expressed in thousands of yards, the April statistics follow:

Total nine groups — production, 237,185; stocks, 176,681; unfilled orders, 474,530.

Drills and twills—production, 16,946; stocks, 9,093; unfilled orders, 31,677.

Wide drills, twills and broadcloth production, 13,825; stocks, 8,474; unfilled orders, 28,735.

Print cloths, plain and fancy—production, 66,048; stocks, 16,166; unfilled orders, 134,751.

Pajama checks and ginghams—production, 26,214; stocks, 42,314; unfilled orders, 51,026.

### Denims and Chambrays.

Denims and chambrays—production, 40,413; stocks, 40,475; unfilled orders, 95,021.

Canton flannels (for mitten trade)—production, 3,221. stocks, 4,075; unfilled orders, 9,859.

Osnaburgs — production, 10,199; stocks, 3,378; unfilled orders, 19,053.

Narrow sheetings—production, 53,370; stocks, 28,232; unfilled orders, 89,180.

Wide sheetings—production, 7,029; stocks, 24,474; unfilled orders, 15,228.

## "This Is Cotton Year"

"This is Cotton Year." At the suggestion of Walker D. Hines, president of The Cotton-Textile Institute, Inc., this slogan has become available for the "unrestricted use" of all elements of the industry engaged in the manufacture and distribution of cotton goods, it was announced.

The general availability of the slogan has been made possible by the generous action of the Hunter Manufacturing & Commission Company, of 58 Worth street, who originated and copyrighted the slogan, but released it for general use. Donald S. Shaw, advertising manager of this firm, was the author of the slogan.

The letters written by Mr. Hines and Floyd W. Jefferson, chairman of the executive committee of Hunter Manufacturing & Commission Company were as follows.

June 2, 1927.

Floyd W. Jefferson, Esq.,
Hunter Mfg. & Com. Co.,
58 Worth Street, New York.

Dear Mr. Jefferson:

You have used the phrase "This is Cotton Year" in the advertisements of the Hunter Manufacturing & Commission Company and have no doubt found it helpful for the mills you represent.

Often a condition of mind has been changed for the better by some direct, clear-cut slogan and the one you have selected seems to be singularly apt and well chosen. The thought occurs that inasmuch as the phrase has such a broad significance it might be a splendid idea to make it available to the entire trade. I pass this on merely as a suggestion for whatever consideration you may wish to give it.

Sincerely yours,
(Signed) Walker D. Hines,
President.

New York, June 6, 1927.

Mr. Walker D. Hines, President,
The Cotton-Textile Institute, Inc.,
320 Broadway, New York.

Dear Mr. Hines:

We have just received your letter of June 2nd and regarding the slogan "This is Cotton Year" which we have been featuring in our advertising.

We are delighted to follow your suggestion and to release this phrase for the unrestricted use of the entire trade. We believe with you, that a simple statement of fact, such as "This is Cotton Year," can have a far reaching influence on the whole market and are in entire accord with the idea of its general use. As you say, the words have a broad significance and should prove an effective slogan for our whole industry.

Thanking you for your suggestion and for the opportunity it gives us to be of service to the Institute and to the industry, we are

Cordially yours,
(Signed) Floyd W. Jefferson,
Chairman, Excutive Committee.

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| RICHMOND | NORFOLK | VIRGINIA BEACH |
|---|---|---|
| $7.50 | $8.50 | $9.00 |

Tickets on sale going on all regular trains to junction points, thence special train and regular trains 12 and 40, Friday, June 17, 1927. Final limit good to return on all regular trains (except 37) up to and including train 11 leaving Richmond 10:20 P. M. and train 3 leaving Norfolk 7:00 P. M. Wednesday, June 22, 1927.

Tickets good in pullman sleeping cars upon payment of pullman charges.

Through sleeping cars and day coaches.

Through sleeping cars and day coaches.

No baggage checked. No stop-overs.

Fine opportunity to spend the week-end in Richmond and at Virginia Seashore resorts.

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**1411 So. Mint Street**
**P. O. Box 412**
**Charlotte North Carolina**

## Weaving Qualities Of Yarns

(Continued from Page 10)

the next point to consider is the healds or harness and the reed.

The weaving quality of cotton yarn is influenced considerably by the healds or harness used in connection with the shedding motion.

The depths of healds, quality, uniformity, size and shape of the heald shafts and the general arrangement of the healds, have a direct bearing upon the yarn in process; while the counts and quality of material, shape and size of the mail eye, weight of lingoe, height of comber board, and general arrangement of the harness mails, are factors to be considered when harness mounting is used.

Suitable healds or harness are essential for good weaving.

As regards the reed, this is of equal importance, and it is surprising what an improvement has been made during the past 12 years in connection with the manufacture of reeds for weaving purposes.

This forms a very good example of what can be done in regard to weaving accessories, and any manufacturer who is using the old-fashioned reed just because he has always used this type, has a self-imposed handicap.

An increase in depth, rounded edges to the wire, and increase in the space are all advantages to be gained in connection with the reed.

There are many instances where the improved reed has been rejected by the manufacturer because faulty cloth was caused by the wires being constantly bent out of shape. The fault is not the construction of the reed, but an imperfect traverse of the shuttle, and it is essential to have reasonable conditions in the loom if such improvements are to be used to the best advantage. It is advisable to strengthen the reed at the sides in order to counteract the pull, when the loss of width from the reed to cloth is normal or above normal, but in other respects the improved reed may be used for most cotton fabrics.

When the weaver's beam is ready for the loom, the following factors must be considered in connection with the weaving qualities:—

1. Overlooker.—The gait-up of the beam is certainly an important consideration, and unless the conditions are suitable for weaving, the best yarn may be labelled below good weaving quality.

This applies to all grades of fabrics, but particularly to some of the classes that are sure to be an important section of both our home and export trade.

Some of the important points for the overlooker to note, in addition to the loom being in fair condition before the warp is taken to the loom are as follows:—(a) Beam in correct bearings and free to revolve without uneven friction, (b) warp line correct and stretch in accordance with the fabric to be woven, (c) correct lease and position of lease rods, (d) size, time and nature of the shed, (e) uniform delivery and required tension of the warp, (f) take-up of the cloth in accordance with requirements, (g) fell of cloth retained without excessive tension, (h) perfect traverse of the shuttle, and (i) uniform drive of the loom and correct speed.

If the overlooker attends to these details and the loom is attended by a careful weaver, the facilities for good weaving have been provided so far as the overlooker is concerned.

If, however, the overlooker ignores some of these factors, or he is not proficient in his duties, it is quite possible that scores of breakages will result, and the yarn may be considered fair quality when it is actually good in the hands of a reliable overlooker.

2. Weaver.—The weaver who is in charge of the loom may assist the weaving qualities or she may reduce them. Crossed ends, damaged healds, shuttles damaged, no regard for tension of the warp yarn, end in wrong lease, cops incorrectly skewered, marking fork grate and reed with the shuttle tip, and many other mistakes by the weaver have a serious influence upon the weaving qualities, and, although these defects react upon the weaver and reduce her earnings, it is often difficult to make them undertand the influence of these defects.

3. Warp Tension Device. — The warp tension during the process of weaving is a very important factor, in fact the most important so far as the warp yarn is concerned. The tension on the warp required for successful weaving depends upon the fabric to be produced.

If we could entirely disregard the feel, appearance and many other essential features of finished goods, and prepare yarns to suit the weaving process, many features of our difficlties would disappear. This is impracticable, and we must consider these factors, which of course compels us to appreciate the value of a reliable spinner and the sound judgment of the man responsible for the purchase of the yarns for a given purpose.

In this connection there is ample scope for investigation, and greater care on the part of the manufacturer.

The tension placed upon the warp yarn in the loom is primarily for the purpose of forming a shed and retaining the fell of the cloth—but since the shedding may vary (even in two looms weaving the same fabric) and also a slight difference in setting the warp line may influence the fell of the cloth—it is obvious that the tension may differ for the same class of yarn in different looms. It is suggested that lengthy investigations in this connection would prove extremely useful, both for the spinner and manufacturer. Some overlookers assist the weaving qualities considerably, by a thorough knowledge of the essential settings of loom parts in order to reduce the tensile strain on the yarn, and at the same time keep a uniform fell of the cloth.

Speaking in a general sense, there is a strict division in cotton fabrics, and the fabrics in one class are woven with the major amount of strain on the warp yarns as a result of shedding, while the other class are produced by the excessive strain being placed on the yarn at the beat-up of the weft.

For example, take a dhooty cloth.

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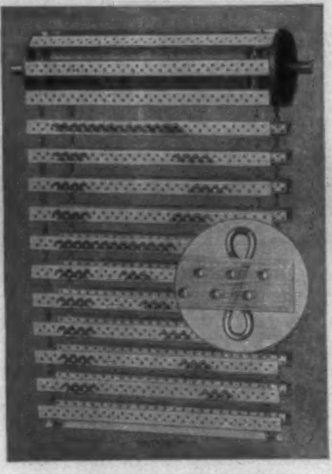

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The strain of the beat-up is not excessive, but during the formation of the shed it is necessary to have normal tension in order to get the colored (crammed) yarn to shed correctly, and if we require to make clear sheds, the beams must be skilfully prepared and have a fair tension applied to the yarn in the loom, while if, on the other hand, we take a heavy five-shaft fabric or a plain moreen, the greatest strain is placed upon the yarn when the weft is forced to the fell of the cloth and the strain due to sheeding comparatively less.

The influence of the tension due to weaving the fabric required is a viarable factor, and when yarns with certain characteristics must be used for a given quality or kind of fabric, it becomes a difficult problem to decide how to pass the material through the loom. Also, if the person who buys the yarn is not fully aware of the difficulties that may arise, considerable trouble is caused in the manufacture.

There is scope for a lecture on this point alone.

The trade union idea of a standard for warp and weft breakages will take some considerable discussion before all the people concerned are able to arrive at an agreement. In the important part played by the traverse of the shuttle, one only requires to watch the different weavers fix the cops on the shuttle to find out where a fair percentage of breakages take place. The skewering of cops is the cause of a tremendous number of weft breakages. The traverse of the shuttle is one of the complicated parts in connection with the power loom. There have been many attempts to improve this part of the process, but so far they have not been a very great success. Faulty unwinding of the weft is another source of trouble. Thousands and thousands of breakages are due to this particular fault.

Again, I am convinced that we do not fully appreciate the importance of the fell of the cloth and contraction during the process of weaving. If we could only impress upon all ooverlookers in Lancashire the necessity for ideal selting, and seeing to it that all the fabrics do not get below a proper line, we should achieve a vast improvement in our output.

There are many points in connection with the weaving qualities difficult to explain, and in a large number of examples this quality, in connection with both warp and weft yarns, does not receive much consideration—but in many instances the weaver has not much to complain about. Strength is a factor in the high-grade yarns, but quality should be the dominant feature.

A manufacturer with whom I am acquainted has some 300 looms standing, and he is one of the best makers of a particular class of cotton goods requiring fine yarns. He could fill up a portion of the looms if he books orders and buys yarn for the purpose at 5d. per pound less than the quality he prefers. The manager is agree able to use this yarn to keep his weavers, but he is well aware of the fact that the results will not be so satisfoctory as with the better class of yarn. This accounts for many similar cases, and it is a question of "Need makes the naked man run."

The subject is comprehensive, and requires considerable thought, and gives plenty of scope in a section of the industry that has not received much support from the investigation departments of our various institutions.

## Chemical Exposition

Developments in the fields of chemistry and chemical engineering have been so rapid since the Tenth Exposition of Chemical Industries that the interest aroused is shown to a marked degree by the entire industry and the industrial world in the coming Eleventh Exposition of Chemical Industries.

Particular interest has been shown toward the sections of the exposition that will be devoted to synthetic products, lacquers and the machinery and container sections. These sections already have listed a number of exhibits that will appear for the first time either in domestic or foreign markets and the interest manifested points plainly to the value of such products and developments. Among the interesting exhibits will be that of vita glass, which permits the passage of ultra violet rays from sunlight, thereby transmitting the life giving rays which ordinary glass will not permit. It is expected that this exhibit will be particularly interesting from a scientific standpoint, as it is already creating comments.

The foreign exhibits are increasing, and as this is the first time in the history of the exposition that the doors have been opened to foreign exhibitors, domestic consuming manufacturers are anxiously waiting to see the foreign displays and compare such products with what they are now using. This will particularly apply to the dye and synthetic products along with the foreign method of handling and equipment used in the way of instruments of precision.

In the past decade the world has come to realize as never before the value of scientific research to not only industry but to life itself. The progress, though slow and tedious, has brought some startling developments in every branch and field of industry and each year the scope and funds for such developments are being gradually increased.

There is no place else in the world where such a collection of achievements and scientific development of chemical industries has been exhibited as at the Eleventh Exposition of Chemical Industries, to be held at the Grand Central Palace September 26 to October 1, 1927.

In addition to these exhibits the students' course is attracting wide attention and not only will the leading schools and universities have students there but many professors will attend the lectures. Indications point to an unusually large attendance from various industries not only by engineers but by executives, as much interest is being displayed in the subjects and lectures that bring together the leading authorities in the chemical and industrial world.

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# Cotton Goods

New York. — Although business was not quite so active during the week, prices on cotton goods held firm and advances were made on some of the staple lines of finished goods. The better weather made for more business in wash goods. Sales of print cloths and sheetings were moderately large. A number of mills withdrew their offerings of coarse yarn goods and were asking higher prices as a result of the higher cotton prices.

Reports compiled by the Association of Cotton Textile Merchants show that production is 15.3 per cent in excess of a year ago for May, sales 91.5 per cent for May; shipments, 22.8 per cent and unfilled orders 162.6 per cent greater. Stocks on hand May 31 were 38 epr cent less than a year ago. Production is a little smaller than it was in the early months of the year due to an abandonment of night work in some places.

Trade in tire fabrics was better and many mills of these goods are now sold ahead until September. While mill prices on duck have been advanced, secondary distributors offered concessions. Fine combed yarns goods moved moderately well. Contracts placed for fine goods were at slightly higher prices than during the preceding week.

At the end of the week, quite a large business was coming through on print cloths. A number of large contracts into September were reported, with many others running through June and July. A fair number of smaller orders were placed for prompt shipment. There was good business in 64x60, 5.35 yard for July-August-September delivery, at 7¼ cents. A fair amount tof this yardage was put over late Thursday, and there was more of it involved Friday. Quite a few houses were holding for three-eighths, and there was question at the close whether much more could be had for July at one-quarter.

In 68x72, 4.75 yard, 8½ was the market for nearby, and this was also paid for July-August. There had been reports of three-eighths for August-September.

Scattered lots of sheetings were taken at unchanged prices, and a few at advances of ⅛c. Spot 36-inch 3.25-yard brought 9⅛c and 56x60 4-yard sold at 8c for later delivery. Buyers took 31-inch 5-yard at 6½c; 36-inch 5.50-yard 6c; 40-inch 2.85-yard 10¼c; 36-inch 5-yard 6¾c.

There was more interest in carded broadcloths for nearby delivery particularly in the 100x60s, of which quite a fair quantity sold at 10¾c. Intimations that some centers had become willing to take business at this price had been discerned earlier in the week, but buyers did not seem to pay attention. They picked up all the nearby goods they could find at three-quarters and at the close the general quotation was again even money.

In the Fall River market despite the acute shortage of print cloth constructions, with a large volume of orders unplaced during the week, estimated sales were placed at better than 100,000 pieces. The cotton situation was a deterrent to heavier trading, and mills passed up the opportunity to engage their looms well into the fall months because of this condition. The situation has not improved with regard to production, and, in fact, considerable more machinery has been shut down. The scarcity of constructions applies to the entire print cloth list. Buyers met some of the advances asked, about an addtional eighth.

The discrepancy between the increased cost of production by the advance in cotton and the failure of goods to correspondingly advance, is sure to result in a further scarcity of goods.

Cotton goods prices were quoted as follows:

| | |
|---|---|
| Print cloths, 28-in., 64x64s. | 5¾ |
| Print cloths, 28-in., 64x60s. | 5½ |
| Print cloths, 27-in., 64x60s. | 5⅜ |
| Gray g'ds., 38½-in., 64x64s. | 7¾ |
| Gray goods, 39-in., 68x72s.. | 8½ |
| Gray goods, 39-in., 80x80s.. | 10¼ |
| Brown sheetings, 3-yard .. | 10¼ |
| Brown sh't'gs., 4-yd., 56x60. | 9 |
| Brown sheetings, stand.... | 11½ |
| Tickings, 8-oz. ............ | 19 a20 |
| Denims .................. | 15 |
| Staple ginghams, 27-in.,.... | 9 |
| Kid finished cambrics..... | 8½a 9 |
| Dress ginghams .......... | 14⅝a16½ |
| Standard prints .......... | 8 |

### Cotton Cloth for Barrel Concern.

Goldsboro, N. C.—Impossibility of an increased demand for cotton is seen by W. L. Thornton, Jr., secretary of the Carolina Shippers, Inc., with headquarters at Wilson, N. C., if experiments looking to the perfection of a satisfactory cover material for potato barrels from cotton are successful.

Burlap is the material used for these purposes at present. Cotton coverings for barrels in which potatoes are shipped would add materially to the consumption of cotton cloth each year, according to Mr. Thornton. There is an average of 1,300,000 barrels of potatoes shipped from eastern North Carolina every year with a requirement of some two-thirds of a yard of cloth for each barrel.

Southeastern Selling Agency
LESSER-GOLDMAN COTTON COMPANY
OF ST. LOUIS, MO.
P. H. PARTRIDGE, Agent, Charlotte, N. C.
Extra staples, and good 1 1-16 and 1⅛ cotton from Arkansas, Oklahoma, and Texas, and Memphis territory.

# The Yarn Market

Philadelphia, Pa. — There was some improvement in the carded yarn situation during the week. Inquiry was much more active and actual sales were larger than they have been for the past several weeks. While spinners have maintained prices well above most offers made by consumers, the latter were more ready to pay spinners quotations than formerly. In others, the new higher list was better established as more buyers met spinners figures. The greater part of the business was limited to small orders, but the total of these accounted for a very fair business. Buyers continued to hold back on contracts for future delivery, but there are indications that more of this business should develop within the next few weeks. There is a general feeling in the trade that July will see a considerably improved situation. Cotton appears definitely higher and fear of a drastic drop is not as general as it was a few weeks back.

Production has continued large, but consumption has been well in keeping with the outptut. So far there has been no evidence here that stocks were accumulating sufficiently to burden the market. There are no large stocks in this market and the same thing is of stock at the mills.

Combed yarns continued fairly active during the week, with prices very strong all along the line. Market reports indicate that the combed yarn mills are sold further ahead than they have been in a long time. The sharp advance in staple cotton has moved combed yarn prices up rapidly. Gaston county spinners are generally busy on orders that will keep them well occupied for some weeks to come and are carrying very light stocks. Single combed yarns have moved up faster during the past two weeks than the two-ply numbers and sales were fairly large.

Yarn quotations in this market were as follows, although these prices are generally lower than spinners would accept:

**Southern Two-ply Skeins.**

| | |
|---|---|
| 8s | 27½ |
| 10s | 29½ |
| 12s | 29½ |
| 14s | 30½ |
| 16s | 30½ |
| 20s | 32 |
| 26s | 36 |
| 30s | 38 |
| 40s* | 47 |
| 40s† | 48½ |

**Southern Two-ply Warps.**

| | |
|---|---|
| 8s | 28½ |
| 10s | 29½ |
| 12s | 29½ |
| 14s | 30 |
| 16s | 31 |
| 18s | 31½ |
| 20s | 32 |
| 24s | 34 |
| 26s | 36 |
| 30s | 38 |
| 40s* | 46½ |

---

*Ordinary. †High grade.

**Southern Frame Spun Carded Yarn on Cones—Cotton Hosiery.**

| | |
|---|---|
| 8s | 28½ |
| 10s | 28½ |
| 12s | 29 |
| 14s | 29½ |
| 16s | 31 |
| 18s | 31½ |
| 20s | 32 |
| 22s | 32½ |
| 24s | 32½ |
| 26s | 33 |
| 30s | 34½ |
| 40s | 46 |

**Southern Single Skeins.**

| | |
|---|---|
| 4s-8s | 28 |
| 10s | 28½ |
| 12s | 29½ |
| 14s | 29½ |
| 16s | 30 |
| 18s | 30½ |
| 20s | 31 |
| 22s | 31½ |
| 24s | 34 |
| 30s | 34½ |
| 40s | 44½ |

**Southern Single Warps.**

| | |
|---|---|
| 4s-8s | 28½ |
| 10s | 29½ |
| 12s | 29½ |
| 16s | 30½ |
| 18s | 31½ |
| 20s | 32½ |
| 24s | 34½ |
| 30s | 36½ |
| 40s | 46½ |

**Southern Two-ply Comber Peeler Mercerizing.**

| | |
|---|---|
| 8s-12s | 44 |
| 20s | 45 |
| 30s | 49 |
| 36s | 54 |
| 38s | 56 |
| 40s | 57 |
| 50s | 59 |
| 60s | 68 |
| 70s | 78 |
| 80s | 91 |

**Southern Two-ply Hard Twist Combed Peeler Weaving Yarns.**

| | |
|---|---|
| 8s-12s | 40½ |
| 10s | 42½ |
| 30s | 47½ |
| 36s | 52½ |
| 40s | 54½ |
| 50s | 55½ |
| 60s | 57½ |
| 70s | 77½ |
| 80s | 86½ |

**Two-ply Mercerized Yarn.**

| | |
|---|---|
| 20s | 62 |
| 30s | 66 |
| 40s | 71 |
| 50s | 78 |
| 60s | 87 |
| 70s | 1.01 |
| 80s | 1.14 |

## Consider Statistics On Printed Goods

The Cotton-Textile Institute, Inc., authorizes the following:

For some weeks past there has been considerable informal discussion as to whether it was both feasible and desirable for the printers of cotton fabrics, both the job printers and the corporation printers, to develop more complete statistics than are now available as to production and stocks on hand. Further discussion on this subject took place at the office of The Cotton-Textile Institute this morning. No conclusion was reached, but it was arranged for a special committee to confer with a view to drawing up tentative forms of statistics to serve as a more concrete basis for consideration of the general discussion at a future meeting.

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# Want Department

### Bargain in Machinery If Bought Promptly

1—two cylinder 7 x 5 Lowell Slasher—8 beams, Hyatt roller bearings.

16—Fales & Jenks Spinning frames, 192 spindles each, 2¾ inch gauge, 1½ and 1¾ inch rings.

4—Whitin Spinning frames, box heads, 192 spindles each, 2¾ inch gauge, 1¾-inch rings.

All this machinery now running, may be seen in operation in our mill at Ramseur, N. C. It is to be replaced in July with new machinery of different specifications.

Write, call or come to see us quick. Columbia Manuafcturing Company, Ramseur, N. C.

### For Sale

50 Whitin Model D-2 Combers, 1917 and 1920 model. All 12" lap, 12" coilers. Excellent condition.

24 240-spindle Whitin Tape Drive Twisters, Model "B," installed 1922, wet twist, 3¼" gauge, 1¾" ring, 6" traverse, metal thread boards, end creels. Practically new.

**Southern Textile Machinery Co.**
Greenville, S. C.

### For Sale Cheap!

1 Kitson 34" Automatic Feeder and preparer with one 3 blade plain beater through cleaning trunk to breaker lapper on 2nd floor.

1 Cohoes 2-cylinder Slasher, 7 ft. and 5 ft. complete.

1 Cotton Truck; 1 Howe Platform Scale; 2 Curtis & Marble Inspection Machines.

**E. B. Kitzinger**
10 S. LaSalle St., Chicago.

### Wanted

General manager for 2,000 spindle yarn mill making 8s ply yarn, who can take $6,000.00 stock in plant. Good proposition for the right man. Address "Opportunity," care Southern Textile Bulletin.

### Machinery for Sale

10 Crompton & Knowles 72" wide Jacquard, 1,304 hooks.
20 Crompton & Knowles 82" wide Jacquard, 1,304 hooks.
1 Crompton Loom, 72", no Jacquard.
2 Altemus Bobbin Winders (Skein to Bobbin), 30 spindles.
1 Sizing Machine, Plate type (5 cans).
1 Sizing Machine, Spraying type.
1 Friction Calender, 1 Paper and 2 steel rollers, 64 inch.
1 Moire Calender, 2 steel rolls, gas equipment, 40 inch.
1 Altemus Cop Winder, 48 spindles, skein to cop.
2 Altemus Cop Winders, 28 spindles, skein to cop.
2 Altemus Cop Winders, 30 spindles.
1 Lever & Grundy Silk Bobbin Winder, skein to bobbin, 60 spindles.
2 Silk Spooling Frames, 60 spindles.
2 Polishing machines (Luther).
1 80-spindle (3 rolls for machine novelty).
2 Cotton reel.
1 Sewing Machine (Comley).
4 Sewing Machines (Davis).

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**MORRELL MILLS, INC.**
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**Philadelphia**

### Position Wanted

Young married man with executive ability desires textile connection. Five years mill office experience. Now employed but wishes to connect with organization offering opportunity for further advancement. Satisfactory references furnished. Address G. M. V., care Southern Textile Bulletin.

### Wanted

Master Mechanic for 85,000 spindle mill. Address L. M., care Southern Textile Bulletin.

### Wanted

One long chain beamer and one Drawing-in machine man. Communicate at once with Geo. R. Murphy, superintendent, Asheville Cotton Mills, Asheville, N. C.

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# EMPLOYMENT BUREAU

The fee for joining our employment bureau for three months is $2.00 which will also cover the cost of carrying a small advertisement for two weeks.

If the applicant is a subscriber to the Southern Textile Bulletin and his subscription is paid up to the date of his joining the employment bureau the above fee is only $1.00.

During the three month's membership we send the applicant notices of all vacancies in the position which he desires and carry small advertisements for two weeks.

We do not guarantee to place every man who joins our employment bureau, but we do give them the best service of any employment bureau connected with the Southern Textile Industry.

WANT position as cloth room overseer. Now employed as second-hand in cloth room in mill having a weekly production of about 200,000 pounds. Familiar with ducks, monarch enameling ducks, sail ducks, shoe ducks, laundry ducks, and harvester ducks. Good manager of help. Age 45, married and have eight in family. Have three to work in mill. Can give good references. No. 5155.

WANT position as overseer of carding and spinning. Experienced on spinning. Good references. No. 5156.

WANT position as overseer of weave room. Experienced. 33 years of age. Good references. No. 5157.

WANT position as superintendent, or carder, or spinner. Long practical experience combined with textile education. References. No. 5158.

WANT poistion as overseer of weaving. Experienced on cord weaving and plain weaving. Good references. No. 5159.

WANT position as second hand of carding or overseer of carding. Employed at present but can change on short notice. Good reference. No. 5160.

WANT position as second hand of spinning, or spooling and warping in 20,000 to 100,000 spindle mill ;or overseer of spinning in small mill of 10,000 to 50,000 spindles. Will consider position in either yarn or weave mill. Experienced. 29 years of age and married. Can furnish good references. No. 5161.

WANT position as superintendent of yarn mill, or overseer of carding. Could change on reasonable notice. References. No. 5162.

WANT position as overseer of fancy weave room. 9 years experience as overseer on all fancies. Can furnish A-1 references. Desire salary of $7.00 a day or more. No. 5163.

WANT position as overseer of spinning. Have been on present job for 15 years. Can furnish good references. No. 5164.

WANT position as superintendent. Experienced on tire cords, combed and carded yarns. Good references. No. 5165.

WANT position as superintendent, or overseer of carding. Experienced. Can furnish the best of references. No. 5166.

WANT position as superintendent or assistant superintendent. Expert on cotton carding, spinning or winding. I. C. S. graduate. Could straighten out a plant that is run down. Sixteen and one-half years on last position. Good references. No. 5167.

WANT position as superintendent, or overseer of carding and spinning. Experienced. Married and have family. Can furnish good references. No. 5168.

WANT position as second hand in spinning. Experienced. Can give good references. No. 5169.

WANT position as master mechanic. Have had 14 years experience, with 6 years on present job. Can furnish good references. No. 5170.

WANT position as superintendent, assistant superintendent, or overseer of carding and spinning. Good references. No. 5171.

WANT position as superintendent or overseer of spinning. Experienced. Have been overseer for twelve years. Can furnish good references. No. 5173.

WANT position as superintendent. Prefer fancy weaving mill in Piedmont Section of N. C. or S. C. Would consider other location. Employed at present but desire change. Good references. No. 5174.

WANT position as overseer of carding Have had ten years experience as overseer on white and colored work. 40 years of age, married and strictly sober. Can give good references. No. 5175.

WANT position as second hand or overseer of carding in small mill. Have had 28 years experience as fixer and second hand. Married. Strictly sober and reliable. No. 5176.

WANT position in either silk or fine cotton mill as superintendent, assistant superintendent, designer or overseer of weaving. Have been boss weaver and designer 25 yars; 7 years in the South and 18 years in New England on fine fancy cotton and silk goods and all kinds of novelties. Good references. No. 5177.

WANT position as overseer of weaving. Experienced. Prefer place in North Carolina or South Carolina. Can give god references. No. 5178.

WANT position as superintendent of small mill, or overseer of carding in large mill. Experienced. Can furnish god references. No. 5179.

WANT position as superintendent or overseer of weaving. Experienced. Can give good references. No. 5180.

WANT position as superintendent or overseer of weaving. Good references. No. 5181.

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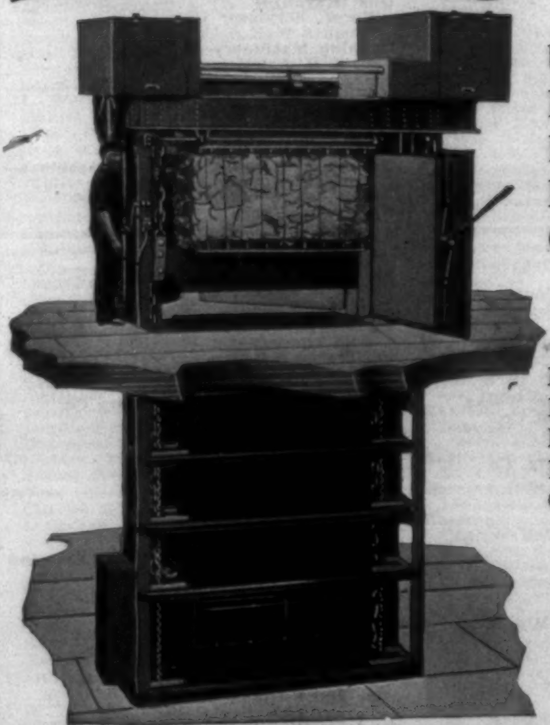

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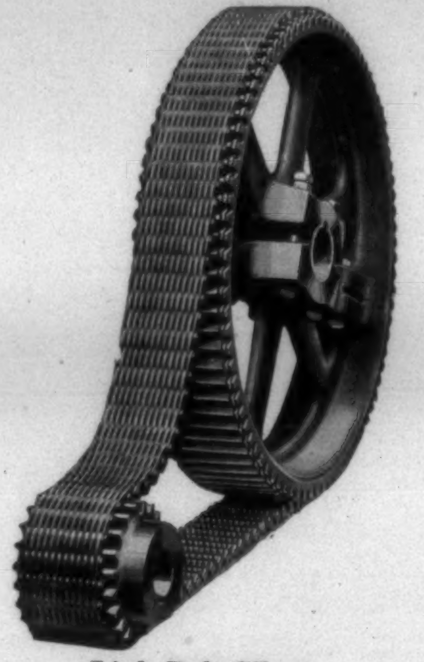

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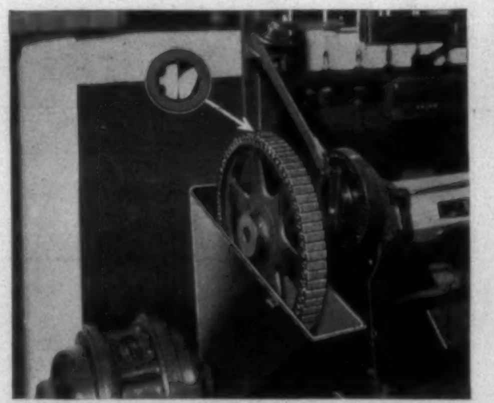

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